

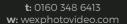
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A week in photography



Photography brings many benefits: it enables you to express your creative side, gets you out of the house and helps you make friends via camera

clubs or workshops. Less well known are the psychological benefits that accrue from our hobby/vocation. Increasing evidence suggests that image making can help with common mental health conditions, such as anxiety and

depression, and even help those who've attempted suicide to find a new meaning in life. This is a serious topic and our cover story (page 20). Staying with the theme of calming and meditative photography, we're thrilled to have Tim Clinch share his still-life skills on page 14. We also feature Panasonic's brand new Lumix GX9 and Lumix TZ200 (page 6) perfect cameras to take out and about this year.

Amateur amateurphotographer. **hotographer** co.uk



flickr.com/aroups/ amateurphotographer

Nigel Atherton, Editor





ONLINE PICTURE OF THE WEEK

Snowdrops by Jo Stephen

Sony Alpha 58, 90mm, 1/160 sec at f/2.8, ISO 160

This snowdrop shot was uploaded to our Twitter page using the hashtag #appicoftheweek. It was taken by photographer Jo Stephen. Jo tells us, 'After many days of rain and dark skies the sun finally appeared, so I decided to visit the village church to see the snowdrops growing in a wild corner of the churchyard. I shot the flowers from the around using my 90mm macro lens. The shot was taken looking up into the winter sun, with the widest aperture to capture all the light that had been missing for so long. I wanted to make an image that whispered of spring in the depth of winter.'





Each week we choose our favourite picture on Facebook, Instagram, Flickr, Twitter or the reader gallery using #appicoftheweek. PermaJet proudly supports the online picture of the week winner, who will receive a top-quality print of their image on the finest PermaJet paper*. It is important to bring images to life outside the digital sphere, so we encourage everyone to get printing today! Visit **www.permajet.com** to learn more.

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CD/DVD Send us a disc of high-resolution JPEG, TIFF or PSD images (at least 2480 pixels along its longest length), with a contact sheet, to the address on page 53. Via our online communities Post your pictures into our Flickr group, Facebook page, Twitter feed, or the gallery on our website. See details above. Transparencies/prints Well-packaged prints or slides (without glass mounts) should be sent by Special Delivery, with a return SAE, to the address on page 53.



NEWS ROUND-UP

The week in brief, edited by Amy Davies and Hollie Latham Hucker



Tenba launches new bag inserts for backpacks

Tenba's new BYOB (Bring Your Own Bag) inserts come in several sizes, suitable for mirrorless and DSLR equipment. There's an adjustable and padded internal divider system; a clear mesh, laminated internal pocket for memory cards and batteries; and two elasticated external pockets for small tripods or monopods. Prices start from £35.

Hurn's 'Swaps' exhibit at Photography Show

Renowned documentary photographer David Hurn has collected over 600 prints, swapping with other photographers (some well known, some less so). A selection of these has been curated by Martin Parr for the 'David Hurn's Swaps' exhibition, available to view at The Photography Show. It will be displayed during the show dates of 17-20 March at Birmingham's NEC, and entry is included in your show ticket.



Sigma announces wideangle Art lens

Adding to its ever-expanding range of high-performance 'Art' lenses, Sigma has revealed the 14-24mm f/2.8 DG HSM lens. Targeted at high-resolution cameras of 50 million pixels and above (such as the Canon EOS 5DS R), the lens is said to boast near zero distortion and minimal chromatic aberration. Pricing is yet to be announced.



Chance to win Alpha 7S II in video contest

Sony is looking for video ideas to be created with its new DSC-RXO camera (which successful pitchers can borrow). The overall winner will also take home an Alpha 7S II and a 28-135mm f/4 G lens. The second prize is an Alpha 6300 and 18-105mm f/4 G lens. See sony.co.uk/RXOvideochallenge for more details.

Zeiss debuts Loxia 25mm f/2.4 lens

Zeiss has added a new lens to its full-frame E-mount range, designed for cameras in Sony's Alpha 7 and Alpha 9 ranges. The new Loxia 25mm f/2.4 is a compact wideangle prime lens, with manual focusing and traditional aperture control; it's priced at £1,189.99. Turn to page 39 to read Andy Westlake's full review.

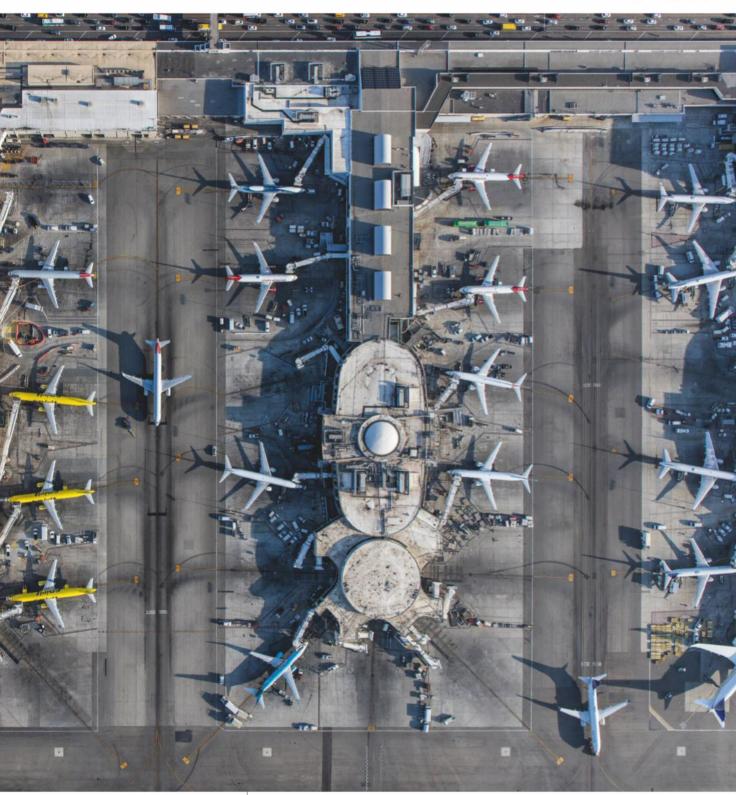


BG

Unique aerial project depicts the life cycle of aeroplanes

Architectural photographer Mike Kelley's images for his project, tentatively titled 'Life Cycles', show the full journey of a plane's life: from creation, through its time in use, and when it is sent to the scrapyard. To get his shots, Mike did not use a drone. Instead he chartered seven helicopter flights to reach





high-vantage points. The series depicts Boeing factories in/near Seattle, seasoned planes in use at Los Angeles airport (shown above) and scrapyards in southern California.

All the images were taken using a Canon EOS 5DS R, coupled with a 24-70mm f/2.8 lens. Incredibly, all the images were shot handheld while flying from a Robinson R44 helicopter. To see more from this stunning series, visit mikekelley.art.

Words & numbers

The photograph itself doesn't interest me. I want only to capture a minute part of reality

Henri Cartier-Bresson

French humanist photographer (1908-2004)





Panasonic Lumix DC-GX9

Andy Westlake casts his eve over Panasonic's latest rangefinder-style camera for enthusiast photographers

Builtin flash

A small flash pops up from the top-plate, with a hotshoe beside it for more powerful add-on units.

At a glance

£699 body only

- 20.3MP Four Thirds sensor
- ISO 100-25,600 (extended)
- 2.76m-dot tilting EVF
- 1.24m-dot 3in tilting touchscreen
- 5-axis Dual IS
- 4K video recordina

Power save mode

The DMW-BLG10E battery is rated for 900 shots per charge with power save enabled, compared to 250 shots without.

PANASONIC has experimented with making mirrorless cameras in a wider range of shapes and sizes than any other manufacturer, exemplified by its flat-bodied GX line. The GX1 was a box-shaped camera with no built-in viewfinder and a fixed LCD, while its successor, the much-loved GX7, was a slightly larger design with a tilting electronic viewfinder and tilting screen. The current GX8 is an altogether bulkier and more complex beast, with a fully articulated screen and large tilting EVF. The mid-range GX80 is similar in size and layout to the GX7, but with a fixed finder.

With the new GX9, Panasonic has listened to its users and made what many will see as a true successor for the GX7. It combines many of the best bits of the GX8 and GX80, while adding in all of the firm's latest technology, including its latest 5-axis Dual IS system and a 20.3MP sensor with the same improved colour processing as the high-end G9. In the process, it's come up with an extremely attractive little camera that should appeal strongly to enthusiast photographers.

In essence, the GX9 uses the same compact-bodied design as the GX7 and GX80, with a tilting screen and cornermounted viewfinder. Like these cameras it has twin electronic control dials, one around the shutter button and the other embedded into the camera's back. But it adds in a number of

charge

The battery can be topped up through the micro USB port, which sits behind a clever sprung retracting door.

Tilting viewfinder

Like the GX7 and GX8 before it, the GX9's viewfinder tilts 90° upwards.





Panasonic Lumix DC-TZ200

Panasonic has turbo-charged its premium 1-inch sensor travel zoom compact





enthusiast-friendly controls from the GX8, including an exposure-compensation dial nested below the exposure-mode dial, and a focus-mode selector switch on the back.

There's an array of buttons arranged around the camera's robust-feeling body, giving plenty of direct access to the most-used functions. The GX9 features Panasonic's well-designed touch interface for changing settings and browsing though images in playback. The touchscreen can also be used for positioning the focus point, even when you're using the electronic viewfinder.

As usual for Panasonic, the camera is capable of 4K video recording, although it lacks the microphone and headphone ports found on the GX8. But it gains a few new additions to the firm's useful 4K Photo mode; the camera will auto-mark its suggested best shot in a burst, and can create composite images by combining selected frames from a sequence, rather like a multiple exposure.

Available in black and silver versions, the GX9 is due to go on sale in early March for an attractive £699 body-only. Customers who pre-order will also get the tempting sweetener of a free 25mm f/1.7 lens.

The built-in tilting EVF is curently unique to Panasonic's GX range

PANASONIC originally invented the 'travel zoom' camera, by combining a long zoom lens with a pocketable body. Two years ago it revolutionised the category with its Lumix TZ100, which used a relatively large 20.1MP 1in sensor for vastly improved image quality, teamed up with a 10x zoom lens and a small electronic viewfinder. It's been my favourite pocket camera ever since.

Now the firm has taken the concept up another notch, by squeezing two major upgrades into its new TZ200, without noticeably increasing the size. First is the lens, which is now a 15x, 24–360mm equivalent zoom in place of the TZ100's 25–250mm. The maximum aperture has dropped in return, but only by about half a stop, to f/3.3–6.4 (from f/2.8–5.9). The second key improvement is the much higher-resolution 2.33m-dot electronic viewfinder, which is also rather larger, with 0.52x magnification. From even my brief hands-on time with the camera, it's obvious that it's much better than the TZ100's.

In terms of design the TZ200 is near-identical to its predecessor, with a metal body shell and large dial around the lens for changing settings. But in a very welcome update Panasonic has added a rubberised strip onto the front of the handgrip, along with a small thumbpad on the back. So unlike the slippery-as-soap TZ100, the new model feels secure in your grasp, even if you shoot one-handed. Two body colours will be available, black and gunmetal grey.

Other features include a 1.24-million-dot 3in touchscreen, which is fixed rather than tilting to keep the size down. It can be used to select the autofocus point when you're shooting with the viewfinder. Bluetooth has been added alongside Wi-Fi, to maintain an always-on connection to your smartphone.



At its fully zoomed 360mm equivalent setting, the lens extends considerably from the camera body



better than the one in the TZ100

Like other Panasonic models the TZ200 can record 4K video, but it now adds 120fps slow-motion Full HD recording too.

The big sticking point, however, is likely to be the price: £729 feels like a lot for this kind of camera. Even so, the TZ200 looks like it should be the best long-zoom pocket camera around, when it goes on sale on 12 March.





Bookshelf MERRIE Merrie Albion By Simon Roberts



ith his images of everyday life in the UK taken on large-format field cameras, Simon Roberts is not to everyone's taste. While his approach can add an almost epic gravitas to everyday scenes in British society, I've heard otherwise open-minded nonbelievers mutter 'I could have taken that on my phone' as they shake their head and walk away. While some compare him to Martin Parr. Roberts sees his work as following in the tradition of Joel Sternfeld. who explored America's cultural landscape in the 1970s via extended road trips.

Merrie Albion curates photos from the last decade, and focuses on events and places that define recent British history. These range from the hugely newsworthy, such as general elections or the Grenfell



The Shoreham Air Show accident almost looks like an afterthought in this scene

Tower tragedy, to the more parochial and banal. Flicking through this handsomely produced volume, several unifying themes start to emerge. First, Roberts reminds us just how in thrall this country is to its past, a theme explored more fully in his project on the National Trust. Choosing to call the collection 'Merrie Albion' further underscores this. Second, Roberts nicely captures the diversity of modern Britain, in a very matter-of-fact way. Whichever community Roberts is shooting, he is a master of capturing crowds, and the comparisons with Bruegel are entirely apt. Third, the Roberts approach is very much about being there, but also distanced - his unwieldy large-format camera puts space between him and his subjects, so he is not an in-your-face documentary or news photographer. His image of the crash at the Shoreham Air Show in 2015 (bottom) left) is a classic example of this; the fireball in the mid-ground is just one tragically incongruous element in an otherwise peaceful image of a great British day out.

This is not to say that Roberts's approach is dry and academic, and a strong affinity with his less-fortunate subjects shines through in this collection. As he says, 'It's about capturing the social landscape.' I find his work very satisfying, so do check out Merrie Albion - even sceptics will find it opens their eyes to new documentary photography approaches.

★★★★★ Geoff Harris

Published by Dewi Lewis Publishing, Price £45, hardcover, 152 pages, ISBN 978-1911306191

Also out now

The latest and best books from the world of photography



The Englishman & the Eel

By Stuart Freedman, Dewi Lewis Publishing, £29, 224 pages, hardcover, ISBN 978-1-911306-20-7



It's been a bumper week for excellent documentary photography books at AP, and this latest collection from Stuart Freedman also makes the cut. As with *Palaces of Memory*, this is a beautifully shot 'love letter' to a unique kind of eatery, though this

time Freedman focuses on London's endangered pie, mash and eel joints, rather than Indian coffee shops. He had a battle raising the necessary funds to get The Englishman & The Eel published via crowdfunding, but the effort was well worth it. These are wonderful images, capturing the unique establishments and their clientele, as well as the careful preparation behind this archetypal cockney cuisine. As Freedman points out. 'These simple spaces hold the memories of a rich largely undocumented cultural heritage... in a city whose only constant is change.' His compositional skills, timing, and use of colour are second to none. **★★★★★** Geoff Harris

Running a Successful **Photography Business**

By Lisa Pritchard, Bloomsbury Academic, £14.99, 28 pages, paperback, ISBN 978-1472532930



Trying to earn a living as a professional photographer these days is not for the faint-hearted, so this book is a useful addition to any aspirant's arsenal. There is a ton of useful practical information here, including advice on drier subjects such as invoicing and the law, along with

some handy templates you can adapt as needed. The book tries to cover a number of different genres and business types, however, and it would have been nice to see more specific advice on the most popular moneymakers, namely weddings and portraiture. Nonetheless, a lot of the sound advice from seasoned pros will work across all genres and some big names are featured, such as Nikon ambassador and wedding photographer to the stars, Kate Hopewell-Smith.

★★★★★ Geoff Harris



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Viewpoint Tracy Calder It's difficult to find room for creativity

when our minds are full of monkey chatter. Practising mindfulness can help

indfulness is the art of paving attention. It sounds simple, but the reality is quite different. Let's take reading this week's issue of AP, for example. Having secured your copy from a newsagent, supermarket, dog's jaws - you sit down for a quiet read when numerous thoughts come rushing into your head. 'Why are Digestives considered the best biscuits for dunking?' 'Where is that awful draught/smell/noise coming from?'

The human mind loves distractions and will happily lurch from one thought, feeling or emotion to another without pause. The trouble is when our minds are full of monkey chatter we fail to experience, or really appreciate, the present moment. Going back to our AP example, we might find ourselves at the end of an article only to realise we haven't taken in a single word.

When we create photographs we are often plagued by monkey chatter, but this time it comes with a generous helping of self-criticism. We might be standing at the foot of a beautiful mountain, for example, with our mind full of judgmental self-talk. 'Why didn't I wear warmer clothes? I'm such an idiot.' 'If Joe Cornish were here he would know which filter to use.' This self-talk can be destructive and takes up

valuable headspace that might otherwise be used for creative thoughts. When we become mindful we create a gap in the thinking process, which allows flashes of perception to rise to the surface. The result is a deeper appreciation of the present moment – and more often than not, unique, meaningful pictures.

Unfortunately silencing the monkey chatter is impossible. If we try to stop the flow of thoughts forcefully they will simply increase in frequency. What we can do is to turn the volume down a bit. The first step is to recognise when our inner critic shows up, and to welcome it with open arms. Next we casually observe if there are any emotions attached to our intrusive thoughts. When the voice inside our head says, 'I will never get the hang of landscape photography,' for instance, we simply label it as frustration and then, crucially, we gently let it go. Our inner voice is keen to label everything as either good or bad and it's hard to stay neutral, so we must practise this impartiality. With time the number of thoughts and associated emotions will gradually decrease, which will allow creativity and fresh insights to float to the surface.

To learn more about the therapeutic benefits of photography turn to page 20.



When you turn down the monkey chatter in your head, a sense of calm will prevail

Tracy Calder is Features Editor at *Amateur Photographer*. She has more than 15 years of experience in the photo magazine industry including two as editor of *Outdoor Photography*.

In next week's issue

On sale Tuesday 27 February



Garden variety

Our experts share their tips on shooting gardens, plant portraits and wild flowers



Keeping it steady

Our guide to image stabilisation and how to get the best out of your camera

Epson Expression Photo HD XP-15000

Matthew Richards tests an A3+ printer

Birds in a flash

Andrew Fusek Peters reveals how to use high-speed flash to shoot garden birds



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Dust up

For years the 'big guns' (Canon and Nikon) have been giving us merely incremental enhancements, and it has been the mirrorless manufacturers (Fujifilm, Olympus, Panasonic and Sony) who have been taking much bigger steps to put themselves on a par with them or, in certain respects, e

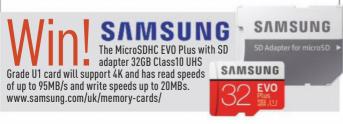
LETTER OF THE WEEK



Even though I am a full-frame Canon user, I like a lot that I read about mirrorless cameras, particularly the Sony A7R III. However, I have read in several magazines that the position of the sensor in Sony cameras seems to make it even more prone to attracting dust. This is not good. I wouldn't expect Canon or Nikon to announce a solution but when will one of the 'upstarts' come up with an innovative solution (supposedly shaking the dust off is only partly successful). Surely one of them can come up with a novel idea to 'hide' or protect the sensor in some way during a lens change and stop the dust from reaching it. Prevention is always better than cure.

Mike Dodman

The Sony Alpha 7 cameras are indeed dust magnets, but it has absolutely nothing to do with the position of the sensor. My old Canon EOS 5D was the same, and its sensor was 'protected' by a shutter. Sigma has used the protection route for many years, with a removable dust cover immediately behind the lens mount, and it works reasonably well. Most other manufacturers have pretty decent methods of keeping the sensor clean by vibrating it at power on/off, with Olympus's SuperSonic Wave Filter (SSWF) being especially effective. However there will always be problems with sticky material such as pollen. In this case, the accessibility of sensors in mirrorless cameras actually makes them much easier to clean – Andy Westlake, technical editor



Black and right

As a regular film user I was thrilled to read the article 'Black & white film essentials' in AP 10 February. The article fully extolled the merits of film as still being a serious medium rather than something considered a bit quaint by today's megapixel-obsessed digital fanatics. How refreshing to have a photo mag in this age of (admittedly, astounding) digital technology that harks back to photography's beginnings. Black & white photography - both analogue and digital - remains popular. But AP is still the only photo publication that salutes film.

I own a DSLR (a Nikon D3200) and I love it. But nothing beats popping a 36-exposure roll of Ilford HP5 into my battered old Minolta X-300 and setting out on a shoot, determined to make every shot count. And I continue to feel the buzz of watching a print magically appear in a tray of developer, even though I've had my darkroom for 35 years. Thank you, AP, for your commitment to film. Long may it continue.

Dave Swann

The sensors

on mirrorless

cameras can be

easier to clean

Film is now well established as an alternative to digital, so it's gone from being a 'film renaissance' to another tool in the image-making toolbox. Rest assured we will continue to cover analogue photography, in all its fascinating and varied forms – Nigel Atherton, editor

Always on the lookout

I thank Andy Blackmore for his moving testament to his friend Charlie in Viewpoint (AP 3 February). He makes an interesting observation on the development of a photographer's mindset, and an immediate analogy came to my mind. Working as a psychotherapist for several decades, one develops a capacity to read between the lines in a state of mind which we call free-floating attention. This has been termed 'the third eye'. I think an experienced photographer develops a very similar state of attunement to his surroundings which we could term vigilance: always on the lookout for a potential picture. In his column, Andy has described this beautifully: 'Once a photographer, you are always a photographer.' So much more than taking pictures.

Ian Macilwain

Thanks, Ian. Hope you will find our feature on photography and mental health (page 20) interesting, too – Geoff Harris, deputy editor

Lighthouse family

I feel that I need to further correct your article 'How low can you go?' (AP 27 January) regarding the Ardnamurchan Lighthouse. Robin Law is correct in his letter ('Gone west' in *Inbox*, AP 10 February) in saying that it sits on the most westerly point on the Scottish mainland. But Ardnamurchan Point is the most westerly point on the British mainland too. Further west than Land's End. I hope you'll find a wee space in your letters page for my pedantry.

lain Macdonald

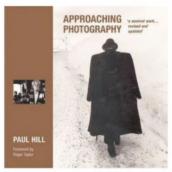
AP is the home of pedants and has been since 1884! – Geoff Harris, deputy editor

He's been framed

I recently rekindled my love for photography through my Pentax K1000 SLR, and set up my darkroom again after a long time. I have been reading back issues of your fine magazine to get some ideas for composition. I always felt that my 'eye', or photographer's eye, was not that great. This is why I stopped taking photos and using my camera. Would you have any suggestions for reading material on composition? The information on the internet is quite a lot and very overwhelming! I use a Nikon D60 for colour photos and my Pentax is for black & white.

Barry

There are lots of books on this subject, but Michael Freeman's The Photographer's Eye and The Photographer's Mind come to mind. Approaching Photography by Paul Hill is another classic – Geoff Harris, deputy editor



Paul Hill's seminal work is a guide for composition and photojournalism





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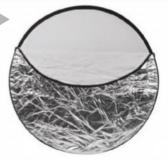
Technique still life



KIT LIST

Tripod ►
A good, sturdy tripod stops your camera wobbling and aids your concentration. Keeping your camera in a fixed position will give you time to work on the set-up in front of you to make any necessary changes.

Reflector/diffuser
I use two or three of these on almost every shoot I do. The best are the ones with a removable cover with gold/silver/white and black, and inside is the all-important diffuser, which gives you so much control over the light.



Light source ► If it's a window (my favourite) try to leave your set-up in place so that you can see what happens as the light changes throughout the day. An alternative is a small LEDGO light put through a diffuser to achieve the same result.





Tim Clinch

Tim Clinch is an award-winning professional photographer with over 40 years' experience. He has worked in most areas of the profession, with his work appearing in magazines worldwide. He has also published

more than 30 books featuring subjects as varied as interiors, travel, food and portraits. To find out more about his work, visit www.timclinchphotography.com.

Keep Still

Still-life photography leaves nothing to chance. **Tim Clinch** explains how to maximise the potential of this classical and underused genre of photography

hat do we mean by still life?
There are a number of dictionary definitions but they all, pretty much, come down to the same thing: 'The depiction of inanimate subject matter, typically a small group of objects.' This encompasses several photographic disciplines, but sums it up pretty well.

The true skill lies in the ability to take something mundane and everyday out of its normal habitat and transform it into something of beauty by using our skills as photographers.

So what is it about still life that I like so much? First of all, obviously, it's the pictures. Some of my all-time favourite images are still lifes.



Standard ► or medium telephoto lens

A 50mm or 85mm lens should enable you to shoot without distortion and keep uprights 'upright'. Wideangle lenses are not particularly suited to still-life photography.



Spare pair > of hands

An assistant can move things while you concentrate on the camera. They are also useful for holding reflectors and/or backgrounds and bringing cups of tea when the creative urges get too much!



Technique stilllife





String from my favourite shop in Sofia, Bulgaria Canon EOS 5D Mark II, 24-70mm, 1/640sec at f/5.6, ISO 400

Edward Weston's photographs of peppers; the wonderful imagery by my photographic hero, Irving Penn; Tina Modotti's beautiful peaceful pictures; and the quite perfect images shot by Charles Jones in the late 1890's (who was not a photographer at all, but a gardener!) come to mind. But above all, it's the discipline involved that gives me such satisfaction.

This genre of photography is 100% down to you – your eye and your skill as a photographer. It takes no prisoners. You choose the subjects, background and lighting. You set it up, and you shoot it. Unlike say, landscape photography, no spectacular sunset is going to miraculously happen to save your bacon. Or in 'street' photography, for instance, no punk rocker with a scarlet mohican is going to wander into your shot to enliven an otherwise dull image. It is all about you, your eye and your skill.

TIM'S TOP TIPS FOR STILL-LIFE SHOOTING



1 Keep it simple

Be brave and don't be afraid to keep it simple. Take an everyday object and transform it into something extraordinary, like the corkscrew in this picture. This is not normally something you would notice, but here is a lovely, strong image.



2 Use a horizon line

This is a classic still-life tool. A horizon line anchors an image on to something by taking our eye straight to the object of our picture, thus introducing an element of stability to the scene in front of us.



3 Get in close

Think about the details that normally go unnoticed. Strip it back and concentrate on form and texture. This is, after all, a study of the object or collection of objects in front of you. Finally, remember to print big to reveal it all.



Draw inspiration from the greats

As a discipline, still life has an amazing history. It is all about composition, and for inspiration we must not only look at photographers, but also at some of the great painters. For me the king of them all is the Spanish painter Luis Meléndez (1716-1780). Even though his work received little recognition when he was alive, he is

considered the greatest Spanish still-life painter of the 18th century. His mastery of composition and light and remarkable ability to convey the volume and texture of individual objects enabled him to transform the most mundane of kitchen fare into powerful images. We can incorporate a lot of his influence into our photography. The composition of a

Why it works

I have a very simple rule when shooting still-life images that works every time and determines whether the picture is successful or not. I ask myself if I could live with it framed on a wall in my house?

This image on the left is one of my favourite pictures, and I am sitting in my office typing this article while looking at a framed print of it on my office wall – so this one definitely passed the test. For me this picture encompasses many of the criteria I have explained about successful still-life photography.

Five rusty old knives found in a friend's French kitchen and placed on an old workbench in a barn with an open door. Everyday objects that are not particularly beautiful or precious in themselves, taken out of their 'comfort zone' and made beautiful. This is a simple image, but as I said earlier, the act of displaying the objects like this makes them much more than the sum of their parts, and somehow elevates them to things of beauty and interest. It was taken during a break while shooting a cookbook and probably took me about five minutes. There is nothing fancy about the lighting or the set-up, but somehow, it works.

I cannot encourage you enough to get your work printed, and this is particularly important for still lifes. They can look absolutely stunning and make a good subject for a conversation.

still-life image is a discipline and has rules, so study the greats and aim high. The rich and varied history of still life as a genre should inspire you.

Backgrounds and lighting

For me, especially in still-life photography, the acronym KISS – Keep It Simple Stupid – is all-important. It is most



4 Odd numbers

When arranging your still-life scene use odd numbers rather than even. Three objects invariably work better than two or four. I genuinely have no idea why, but it's true. Try it for yourself.



5 Attention to detail

Large groups of similar objects, or collections, can make a great picture. But remember that the more elements you have, the more scope for mistakes there is, so check and check again before breaking the set-up.



6 Break the rules

Lovely soft light is wonderful stuff, but as with all aspects of photography, rules are there to be broken – so don't be afraid to try shooting in harsh, direct sunlight from time to time and playing with those lovely hard shadows.

Technique stilllife

often the answer to most photographic conundrums! All still-life pictures require a background of some sort. This can be as simple as a plain piece of cloth or a battered old table. Choose carefully and don't let the background take over the image. Make sure it complements the objects placed on it, or in front of it, but that it's the last thing you notice in the picture. Always ask yourself what is the 'star' of a picture and make sure that your eye goes to that object/person first.

As for lighting, again, simple is best. What did the great 18th-century painters do? Put things next to a window, and, if necessary draped a sheet over it to soften the light. This is exactly what I do. There is no fancy lighting set-up. Just a big, soft sidelight, if needed a diffuser, and normally some sort of reflector to lift the shadows slightly. You really can make it as complicated as you want but, quite frankly, if it worked for Rembrandt, it'll work for me.

Natural versus staged

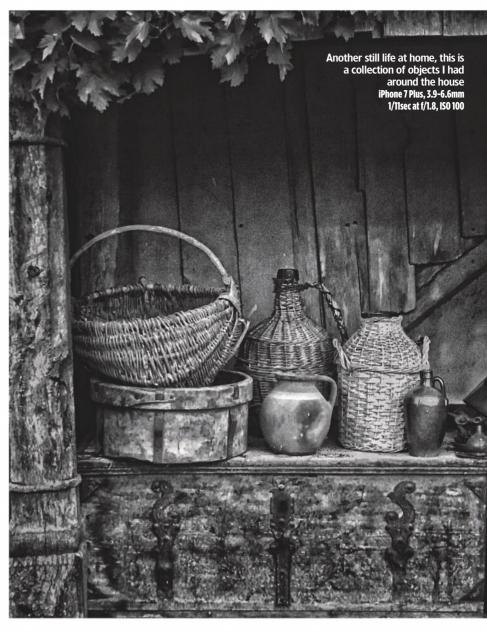
If we agree with the description of 'still life' in the introduction, there are two types of images we can come up with. The first is a group of objects that already exist. These are ones that we notice along the way or that are already in a setting, which we then photograph. The second type of image is something that we set-up from scratch. That is, we use objects that we have chosen, put them on a background or in a situation of our choosing, and move them around until the composition looks pleasing to our eye.

There is nothing wrong with either set-up, but the important thing to remember is that nothing is perfect. So feel free to move things around a little to get exactly the image you want (unless you are somewhere like the British Museum when I would seriously advise against it!).

Food photography

Where does still-life photography end and food photography begin? This is impossible to answer. Several of my images in this article have been featured in food-photography competitions, but they also fit the criteria for still-life photography. I'm often asked about this and my response is always the same. Does it matter? Not really.

So, to sum up my approach to still-life photography, I believe that simple, strong, uncomplicated images always work best. Don't over-worry about 'styling', and go for impact. My rule about whether you should add another element to your picture is 'if in doubt, leave it out.' Be bold. Once you start looking for things to photograph you'll surprise yourself about where you find beauty.



10 simple steps

The most important piece of advice I can give is to slow down and take your time. When shooting still life you need to spend more time looking at the details and light.

Make lots of small adjustments. Moving an element just a centimetre can make all the difference in the world to the finished picture. The closer you are, the more critical this becomes.

Using a tripod not only helps with composition and slowing you down, it also stops camera shake to help you achieve beautifully sharp images.

Despite my last point, I also recommend experimenting by taking your camera off the tripod. You never know what that little extra bit of freedom might add to your picture.

Vary your angle. Whether shooting on or off a tripod, look at the difference a slight

bend of the knees or a half step to the right or left can make.

Don't forget your mobile phone. I have got into the habit of covering pretty much everything I shoot with a camera on my iPhone. The results can be subtly, yet effectively, different.

Similarly don't forget black & white. Still life is a very classical medium and lends itself well to monochrome.

Don't worry too much about being innovative or different. Still life is a classical genre and should be treated as such.

Depth of field can transform a still-life image, so try bracketing and see what difference it can make. The difference between f/2 and f/16 can completely change how you view an image.

Capture texture in your images. Try to take your eye further into your subject than it would normally go.



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Photography ca

...or at least your sanity. **Geoff Harris** talks to both photographers and therapists to see how imagemaking can help with mental health issues

one are the days when mental health problems were assumed to beset only a troubled minority - as the latest statistics reveal, they are very common in the UK. The figures make a sobering read: according to the charity Mind, approximately one in four Britons will experience a mental health problem each year, while one in six people in England report anxiety and/or depression in any given week. Given the United Kingdom's current population is just over 65 million, that's a lot of suffering. While this won't be news to a lot of readers, did you know

that photography is now being seen as a valuable weapon in the battle against anxiety, depression and other mental health disorders?

Photography seems to help in several ways. First, being out with your camera taking serious photographs requires total concentration – or, to borrow the current buzzword, 'mindfulness'. It won't work for everyone, but being out with a tripod and camera to catch a great sunrise, for example, means you're less likely to have the headspace to worry and obsess about other things. It doesn't only apply to landscape photography, though. Second, photography can be a way

Above: Hadrian's Wall, taken by moonlight using a seven-shot panorama. 'When I feel very low I like shooting at night', says Paul Sanders. 'This image took 10 hours in total, and the rhythm of the picture matched how my recent days had been'.

for people to express their feelings and mental state, something which might be difficult to do in words. Art therapists have long realised this, but a growing number of photographers are appreciating the therapeutic value of image making.

Be patient and breathe

Someone with first-hand experience of such issues is Paul Sanders, a landscape photographer, workshop leader and Fujifilm X-Photographer. 'I have always been a photographer, mostly working in news and sport, and I ended up working as the picture editor of a national newspaper,' he explains. 'This seemed to be my dream job, but the accumulated stress and pressure led to a full-on nervous breakdown. I entered a downward spiral that culminated in self-harm and eventual suicide attempts in 2012.'

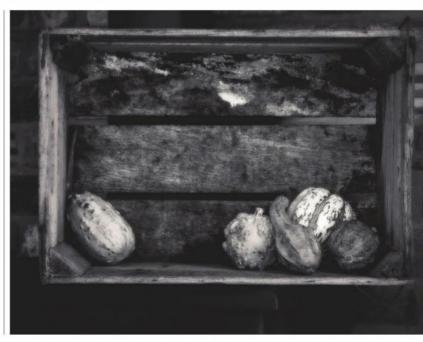


n save your life

Paul is very candid about his struggles, as he is keen to show other sufferers how photography helped him. 'It was only when somebody explained to me that I had more to give creatively, that I pulled back from suicide. I thought a guy like me in his forties should be invincible, and I found it hard to talk about what I was going through and my feelings.'

A breakthrough of sorts came when Paul's counsellor at the time asked why he was taking pictures in a particular way. 'It turns out that what I was doing was searching for calm. At the time, my head was like a badly tuned radio – I wasn't really able to listen to what people were saying, but what they said hit home. When I was out taking pictures, concentrating purely on the creation of an image, my head started to unravel. You

Right: Paul was drawn to this produce, in a box labelled 'ugly fruit'. 'People are happy to give others labels and isolate them. Mental illness is very isolating'.





The therapist's view

Simone Crowley is a certified counsellor who is a passionate believer in the therapeutic benefits of photography

AP What are the biggest ways in which photography can help people with mental health issues, particularly those with depression and anxiety disorders?

SC Photography makes us stop and observe for that period of time - being present in that current moment. The encouragement to focus on the here and now is facilitating mindfulness, which can be successful in stress and anxiety reduction. Photographs can also be a way of communicating. Sometimes it is difficult to verbalise or even find the words to represent how we feel. Traditional talking therapy may not be something someone with mental health issues feels able to engage with. Photographs can be a means of showing our internal world. Through exploration in a therapy session, photographs can be used to reflect on emotional wellbeing.

AP Do you recommend photography to clients who have not done much before, or does it tend to work best for those who are already interested in photography anyway?

SC I have worked with clients that have no previous interest in photography through to professional photographers. Each client will use the tool in a way that is comfortable to them. The therapeutic nature is in the meaning of the image to the individual and the feelings that are evoked while taking the picture.

AP Is there a risk that clients will turn photography into another stick to beat themselves with, when they start having thoughts such as 'I'm not good enough', 'I never win competitions', and so on? **SC** Like all arts, photography is subjective, so what appeals to and connects with one person may have no inspiration or value to another. I [tend to] focus away from the end result back to the here and now, and what the image means and represents to the client. It is not about the technique or quality. I am not creative at all, but have found it a very useful tool to help me reflect on my emotions for awareness.

AP Do you think the benefit is about people expressing their feelings, or is it as much about the experience of being out in the fresh air with your camera and thinking about how to take a good picture?

SC I feel there is value in being outside and away from the hectic world. Many of us live in a fast-paced society where the phone is always with us, the emails [keep] coming through and social media [is only] a click away. To be able to spend some time just being is often a huge benefit. In that moment you can just

be vou. Not be an employee or

employer, a partner or parent.

Being outside and taking exercise – walking to a location – releases chemicals in your brain that help towards making you feel good. This can also help with sleep, which is often an issue when individuals are having difficulties with their emotional well-being. To then be able to focus on the felt sense and create something that is representative to the moment and to express ourselves is a further benefit. In a therapeutic relationship, we would then explore this image to explore feelings, working towards adjustment. Talking about your feelings, being heard can help you understand, feel less alone and supported. Thinking about settings and technique for those who have an interest in photography, again, could be a positive [thing]. Enjoying yourself can help with stress and can also stop you from focusing on worries for a while and effect positive changes in your mood.

AP Any other insights?

SC Photography allows people to express feelings on any subject through creative work rather than with speech. I have found it particularly helpful for those who feel out of touch with their feelings or when a person is having trouble discussing or remembering painful experiences. The creative part of our brain is different from that which we use when talking. It allows us to access protected and subconscious parts of ourselves, which are often where the psychological distress is originating from. So the power of the whole process of photography should not be underestimated.





Few well-known photographers have been more open about their mental health struggles over the years than Paul Sanders

have to be completely "in the moment" when you take a picture. Going to a location, walking around, allowing yourself to be totally absorbed in image making, opening your eyes... The process of taking a picture is very beneficial, as it slows you down, calms you down, and your mind becomes more peaceful. When I am doing a long exposure, I have to be patient; the process is forcing me to sit and be patient and breathe. My depression still comes and goes but it's nowhere near as bad as it was.'

As mentioned before, the therapeutic benefits of making images aren't limited only to landscape photography. Paul recounts the story of somebody he is working with who uses photography as a way of coming to terms with childhood sexual abuse. This particular person constructs sets that tell a back story to the abuse. The images are quite disturbing but very powerful. If you go beyond just using photography as a way to make money or win competitions, it can



be very helpful – you start taking pictures that resonate with you and allow you to exorcise things.'

Keeping it simple

Paul is keen to talk more about how image-making can also be a good way to communicate how you are feeling. 'I found it easier to talk about the feelings behind an image and when I took it, rather than to describe how I was actually feeling in words. A picture can show a sense of isolation, confusion and loneliness. It doesn't always matter if other people don't pick up on this, however; so long as you can see your emotions in your image, it's part of the healing process.' For Paul, it's the creation of an actual image that separates photography from other hobbies that benefit both body and mind, such as running, rambling or knitting. 'Jogging, cycling, etc, allow you to work things out in your head, but they don't allow you to fully visualise your emotions. Photography is also about being true to how you are really feeling when you took the picture. I used

'When I am doing a long exposure, I have to be patient; the process is forcing me to sit and breathe' to get frustrated that I didn't shoot landscapes like Joe Cornish, for example, but this is because emotionally and mentally I was in a completely different place to Joe. For me, the world looks black and white and I can express that in images. I wouldn't necessarily phone a friend and just talk about how I am feeling, but if they ask me, I can send them an image and they "get it".'

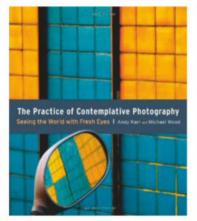
Paul speaks convincingly about how photography has helped him, but surely being a self-employed landscape photographer and course leader these days must also raise his stress levels, given falling payment rates, increased competition, picture thievery and other hassles? 'It can be stressful, but three years ago I decided to dump all my commercial work, and I no longer take commissions. I stripped back life, and downsized to a small flat with a small mortgage. I have taken control of things that lead to further stress and depression. Doing what I do, my income is never going to be big, but I am not materialistic. It's good to challenge yourself. Today I am off to Kyrgyzstan to scout workshop locations and I'm a bit nervous. But I know when I am out there taking pictures, the stress and depression often go.'

As a workshop leader, Paul also finds helping other people with their photography to be very rewarding. 'I get inspiration from helping others. Being able to use my experiences as a photographer is very positive, and my life now has a lot of value. I am so far removed from the



Paul reckons the emptiness of this image, taken in Şirnea, Romania, echoes the loneliness he was feeling. 'I liked the fact the tree has support and the fence gives it direction, too'





Contemplate this

Even if you don't suffer from anxiety, depression or suicidal thoughts, photography can be a means to greater peace of mind and more natural self-expression. Henri Cartier-Bresson, for example, was very influenced by Zen Buddhist philosophy, particularly the 'one shot, one life' spirit expressed in Eugen Herrigel's Zen in the Art of Archery. A more recent book on Buddhistinspired approaches to image making is The Practice of Contemplative Photography by Andy Karr and Michael Wood. It's full of exercises to help you see the world in more spontaneous and 'mindful' ways, without worrying too much about prescribed techniques or specialist gear. AP features editor Tracy Calder also runs mindful photography courses in the New Forest - email tracymcalder@gmail.com.

time I found myself at Beachy Head, thinking of throwing myself off. I give talks, and there are so many people who come up to me afterwards. They say my journey has really touched them. Either they suffer with mental health problems, or their family or friends are suffering. I am just an ordinary guy who has had this problem, so people can relate to me.'

Indeed, Paul's interest in this topic has led him to run more general courses in mindfulness and photography. 'It's not about the technical side or having a fancy camera, as you can express yourself with a smartphone. Taking an extra 10 minutes a day to take in the sights or smells or sounds will improve how you approach the day.'

Small is beautiful

If wide-open landscapes helped Paul Sanders, the tiny worlds of macro photography soothed Matt Doogue, who was diagnosed with stress, depression, anxiety and acute paranoia. 'Although going through counselling helped me, I knew that I needed something to occupy my mind,' Matt explains. 'I'd had a camera for a few months, but not really done anything with it; I found a great photography forum called 'talk photography' – aptly named, as I needed to talk and learn photography. I also began to read photography magazines, including AP, and this passion that had lay dormant started to erupt. I knew



Matt Doogue is an accomplished self-taught macro photographer who has also found image making to be very therapeutic

If you have found photography to be helpful with mental health issues, do get in touch. Details of Paul Sanders's workshops can be found at www. paulsanders.biz, while Matt Doogue's Facebook page is www.facebook. com/mattsmacro. Also check out the section on photographer Daniel Regan on Wex Photo and Video's feature 'More than an image' blog - bit.ly/ wexmentalhealth.

from the first day out with my camera that I felt miles better.'

So what was it about macro in particular that proved so therapeutic? 'Looking through that lens gave me an insight into a small world, a new world. A world where all my worries and stresses went away. With each shot, everything would stand still, just me and the subject in front of me. The only noise was my breath slowing as I began to focus and concentrate, composing, waiting for the right moment to capture, and then the elation of looking back at the moment I had just captured.'

For Matt, as with Paul Sanders, any talk of being 'cured' is premature. 'Recently I slid back into depression. It was not as bad as when I was first diagnosed, but I could feel it coming. For a while I didn't pick up the camera, and when I had free time I would sit around doing nothing. I decided to reread a blog I posted a few years back about my depression, and it made me realise that photography was the key to getting back to my happy place. One morning, [I went] out with the camera and I felt miles better. Photography is now my go-to medicine.'

For support with your mental health, visit www.mind.org.uk (England and Wales), www.samh.org.uk (Scotland) or www.inspirewellbeing.org (Northern Ireland). For information on how to find a counsellor, visit www.bacp.co.uk



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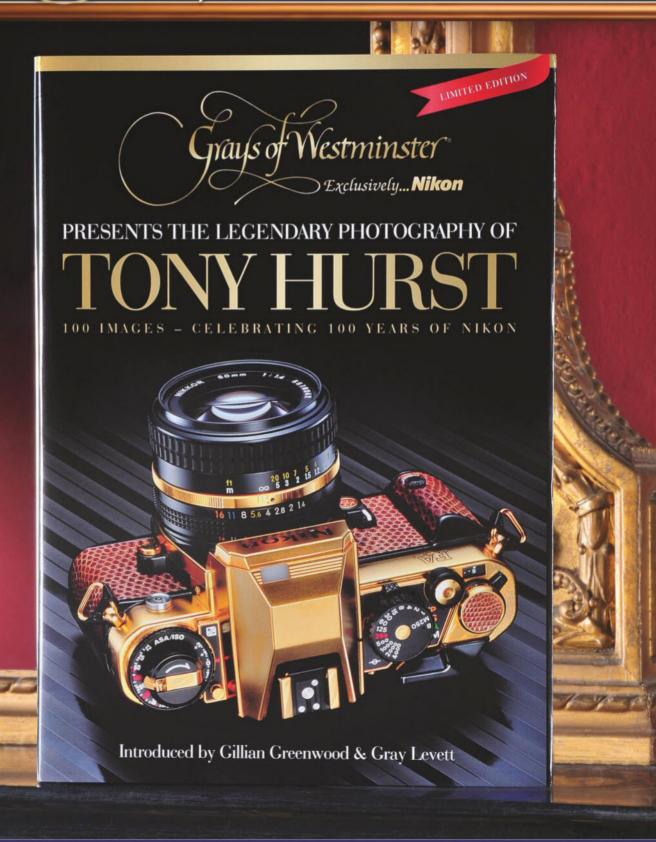






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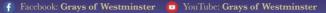
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Paying the price

The list of Wildlife Photographer of the Year winners includes many illustrious names, but few have followed a path as arduous as **Brent Stirton's** to get there, as **Keith Wilson** discovers

n the evening of
17 October 2017, Brent
Stirton sat on the edge
of his seat at the Natural
History Museum, London, as he
awaited the museum director Sir
Michael Dixon's announcement
of the grand title winner of the
53rd Wildlife Photographer of the
Year competition (developed and
produced by the NHM). Earlier that
evening Brent had been on stage
to accept his prize for the Wildlife
Photojournalist Award: Story
category, As a category winner he

was now in contention for the grand prize. But the straight-talking South African had been in this situation on three previous occasions, so why should this evening's outcome prove any different? Indeed, only a few days before the ceremony, the organisers weren't even sure if he would turn up.

As everyone now knows, when Sir Michael read out his name, Brent walked up to the stage, shaking his head in disbelief, and hundreds of people rose to their feet to applaud the photographer who has become





synonymous with depicting the worst aspects of mankind's treatment of wild animals. Much has been said about his winning image, 'Memorial to a Species' (see page 29), depicting a dehorned black rhino killed by poachers. But few knew how much he had been affected personally by the horrors witnessed over the years. That night on stage, Brent revealed: 'My first child is going to be born in February; I'm 48. And I think I left it such a long time because I kind of lost faith in a lot of the work we see as photojournalists. You lose faith in humanity to some extent.'

Breakthrough moment

Brent's faith in humanity was tested on many occasions before he made his name as a leading wildlife photojournalist. Growing up in Apartheid-era South Africa, it was impossible not to be affected by the



country's deadly political troubles. 'South Africa was going through tremendous turmoil at that time,' he recalls. 'I went from wanting to become a doctor to wanting to be a journalist, because I thought our communication with each other within the country was so poor at that time that I didn't think we understood each other as a nation.'

Brent's initial forays into journalism in the late 1980s saw him work as a freelance, writing for Reuters and the local press, covering factional violence between the African National Congress (ANC) and other black liberation groups. It wasn't until he was encouraged to supply pictures as well as words that he decided to try his hand at photography. 'I couldn't find a photographer to work with, so I bought a second-hand camera and spent the next year teaching myself how to use it.' His first

published photo story featured kangaroo courts in KwaZulu-Natal, where people would be judged by the local community and then, as he puts it in a matter-of-fact manner, 'either killed or released based on what was happening in the politics at the time'.

I ask Brent if he now sees those first published pictures as a breakthrough moment – a turning point in his career. His response reveals that, like many of his celebrated peers, photography has become far more than a career. 'Was it a breakthrough moment? Once I found it, it's been my life, you know. Without a hesitation, I've had a great deal of focus on that, detrimental to other aspects of my life, but definitely from the moment I found photography that's been it; that's been my focus.'

Of course, his focus in recent years has been Africa's beleaguered Memorial to a Species. A black rhino bull is seen dead, poached for its horns less than 24 hours earlier at Hluhluwe Umfolozi Game Reserve, South Africa wildlife, particularly the elephants and rhinos systematically butchered at unsustainable rates by well-organised gangs of poachers. Brent has also turned his camera to documenting South Africa's controversial canned-hunting industry, which breeds and





raises lions in captivity with the sole objective of producing high-priced targets for wealthy trophy hunters. Each of these stories requires a circumspect and delicate approach – such is the danger posed by a possible confrontation with well-armed poachers or the volatile temper of a canned-hunting operator. So how does he keep his head down or hidden when he is in the field?

'I try to be as honest as I can be,' he replies. 'There are times when I am in disguise, or I will literally dress up as someone who is not a photographer or make a very clear attempt not to be a journalist, but that's when I'm dealing with people who are clearly breaking the law. They are criminals, you know, and you can't go in there as a journalist. But 99% of the time I'm just trying

to have a discussion where I go [I say to them]: "Look, you have a perspective; you have your own point of view. Let me represent that point of view because I'm not here to take one picture. I'm here to create an essay and that essay should be something that provokes discussion and allows people to arrive at their own conclusion, so let me represent your point of view." I believe in that. That's where we're supposed to be as journalists as well. It's supposed to be an objective profession.'

Working on assignment

As well as being one of the 21st century's most awarded photojournalists, Brent is also one of the most prolific. Every year, he travels to 15 countries or more and spends around nine or 10 months

Traditional dress in a village in Chimbu Province, Highlands, Papua New Guinea. Using flash allows Brent to make 'celebrities' of the people he meets

in the field, usually on assignment for *National Geographic* or Getty Images. To be this efficient, he has honed his technique by using flash outdoors for many of his pictures, thereby guaranteeing a consistent light source, whatever the weather. He explains: 'The thing is, I get asked to do a story that takes in









six to seven countries in the space of five weeks. That happens. That's the modern reality of a lot of *National Geographic* stories, so you really don't have time to wait for perfect light. You just do not have that time.'

But this doesn't mean his photography is solely a record of what he sees. Flash, he explains, enables him to 'make celebrities' of some of the people he meets. 'A lot of the people I photograph are remarkable people, and I want to photograph them in such a way that is above and beyond just a normal snap. I like to think I have evolved (the lighting) to a point where it contributes to a documentary narrative.'

Assessing the future

Ironically, the narrative of many of Brent's most successful images is bleak and bloody. While he stresses the need as a journalist to maintain objectivity, I wonder if he does not feel anger towards those he believes are responsible for every

poached rhino he photographs? 'When it comes to rhino, what you're really talking about is the commercialisation of wildlife. You know, there's a certain statement we're making as a civilisation by going down that route. Is this really where we want to be? I mean, why is it that we permanently take one step back towards the cave than one step away from it? That's how I see humankind a great deal of the time. It's amazing that we don't see the value in trying to coexist with the environment and with nature.'

Listening to the force of these words, I ask him the obvious question: how does Brent Stirton see the future? He doesn't hold back: 'We're idiots! We're idiots! I think the truth is that mankind is not far from the cave, and we have consistently ignored what is right in front of us. We've not learned from history, and unfortunately nature and the environment are right at the forefront of paying the price for that. What fools we are.'



Brent Stirton is a senior correspondent for Getty Images and Verbatim, and shoots mainly for National Geographic. His awards include nine from the World Press Photo. 10 from the Pictures of the Year International competition and four Wildlife Photojournalist of the Year awards. Born and raised in South Africa, Brent now resides in California. USA. Last year's Wildlife Photographer of the Year competition attracted almost 50,000 entries. An exhibition of 100 images from the competition is on display at the Natural History Museum in London until 28 May. Visit www.nhm.ac.uk.



Camera choices

A long-time Canon user, Brent's winning image in Wildlife Photographer of the Year was taken with an EOS-1D X and 28mm f/2.8 wideangle lens. Apart from the flash lights, the rest of his kit is kept to a minimum. More recently he has used an EOS 5D Mark IV and 5DS R, with 24-70mm f/2.8 on one body and a 35mm f/1.4 on the other. 'That is basically it,' he says. 'I would shoot 99% of my pictures with those two. I'm trying to veer towards the 35mm stuff more and more. [In] a lot of the scenes we need to shoot something a bit wider, but 28mm to 35mm is where I live.' On occasion, Brent will also use a Canon EOS M5 because, as he says, 'It just looks like a tourist's camera but it gives me a professional file.' An ideal choice for the photographer who wants to work quickly and discreetly.

These may sound like words of despair and frustration from someone who has all but given up on his fellow man, but with fatherhood around the corner and the biggest prize in wildlife photography to his name, Brent's sense of purpose is far from waning. In accepting the award, he acknowledged the help it would give to raising awareness of the story across the globe. 'For me to win this, for the jury to acknowledge this kind of picture, it's illustrative that we are living in a different time now. I am grateful that the jury would choose this image because it gives this issue another platform. The great thing with this competition is [that] it just means your work gets another life. It gets seen by that many more people [and] the issue gets a certain longevity.

Irrespective of future awards and prizes, Brent's photojournalism will always demand our attention if we want to better understand the human predicament and our impact on the planet. By honouring Brent Stirton, the Natural History Museum – organisers of the Wildlife Photographer of the Year competition – have taken one important step forward.

Reader Portfolio

Spotlight on readers' excellent images and how they captured them

Humayun's Tomb

1 This tomb in Delhi is the inspiration behind the Taj Mahal. Callum wanted to capture the sun glancing off the top of the dome Nikon D610, 18-35mm, 1/200sec at f/6.3, ISO 100

Fish seller 2 Callum was exploring Bai Tu Long Bay in Vietnam when a lady approached 28-300mm, 1/60sec at f/6.3. ISO 100





In 2015, Callum was preparing to travel across Asia when he decided to buy a DSLR to help him document his adventures. Before embarking on his journey, he began experimenting with the camera, and soon

found he had a real passion for image making, particularly portraiture. 'Wherever you go in the world – even within the same area – facial features, clothes, religion, hair and culture are always different,' he says. 'This provides opportunities to capture new and exciting portraits.'

Africa is next on Callum's wish list, where he hopes to capture images of the people, wildlife and landscape he encounters there. His ultimate goal is to become a professional photographer, specialising in travel and adventure. Visit www.callumupfield.com.





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Submit your images

Please see the 'Send us your pictures' section on page 3 for details or visit www.amateurphotographer. co.uk/portfolio



Commuters

3 Watching
commuters pile on
and off trains at
Bharatpur station in
India provided Callum
with the perfect
opportunity for
a candid shot
Nikon D610,
28-300mm, 1/100sec
at f/5.3, ISO 3200

White Beach
The sunsets at
White Beach on
Boracay, Philippines,
are striking. Callum
used the water as
a mirror reflecting
the boats and figures
Nikon D610,
28-300mm,
1/4000sec at
f/3.5. ISO 640

Devotees

5 Callum was visiting a Sikh temple in Delhi when he took this shot. He wanted to catch the lack of expression on the men's faces, and the contrast between their outfits and the marble Nikon D610, 18-35mm, 1/1000sec at f/4.5, ISO 100

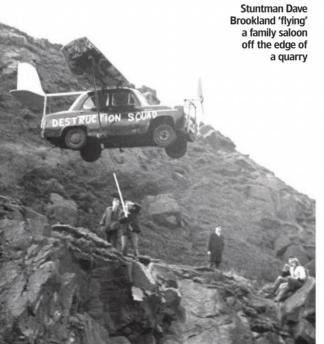


The Way It was

From the dangerous and tragic to the amusing and downright silly, a new book from **David Lewis-Hodgson** takes us back to the 1960s and '70s. **Tracy Calder** enjoys the journey

n 1970, four years before the Health and Safety Commission was established, Joe Weston-Webb paid stuntman Dave Brookland £55 to drive a family saloon off the edge of a quarry. The already battered Ford Popular had been fitted with wings, a tail-plane and a propeller, but nobody really expected it to fly. It travelled a short distance horizontally and then plunged 100ft into the water (see below). Brookland was trapped in the icy depths for about 45 minutes, surviving off a bottle of compressed air, before being rescued by divers. 'He just sat there quietly breathing,' recalls David Lewis-Hodgson, who





was sent by *LIFE* magazine to cover the event. 'Imagine sitting in a wrecked car at the bottom of an abandoned quarry with about an hour's worth of air.'

The 'flying' car was just one of many stunts organised by Joe Weston-Webb and documented by David. Others featured a group of fearless ladies known as The Motobirds, who rode motorbikes through tunnels of blazing straw bales, and allowed themselves to be fired out of cannons, even if they lost their knickers in the process.

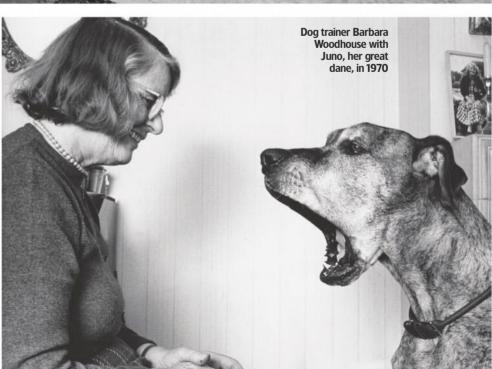
David never set out to be a photojournalist. At the age of 16 he was forced to decide between the arts and science and, with some hesitation, he opted for the latter. 'I think my parents wanted me to study science, and in those days you

were very deferential to the views of your elders,' he explains. A few years later, he secured a place to study medicine at Charing Cross Hospital in London. 'I suspect it was because I played rugby,' he says. 'The ability to kick a rugby ball, together with a smattering of Latin and Greek, were at the time considered the most essential requirements for becoming a physician.' Despite enjoying his studies, the young student still harboured dreams of becoming a photographer, and these feelings intensified when he discovered a book in the bargain box of a second-hand bookshop. People I Have Shot is an autobiography by Fleet Street photographer James Jarché. 'I read the whole thing pretty much overnight,' laughs David. Between



the dull, brown covers Jarché describes the exciting assignments he was sent on, and the famous people he met. 'That chance discovery changed my life,' he smiles. 'I didn't want to spend all of my time dissecting cadavers when I could have been travelling the world – it all sounded so glamorous!'

After reading the book David informed the dean at Charing Cross Hospital that his medical studies were over, and promptly applied for a place at Regent Street Polytechnic to study photography. Luckily, he was accepted. The course was rigorous and oldfashioned, and for the first few terms the students used half-plate Kodak View Cameras and were confined to the studio. Photojournalism was finally







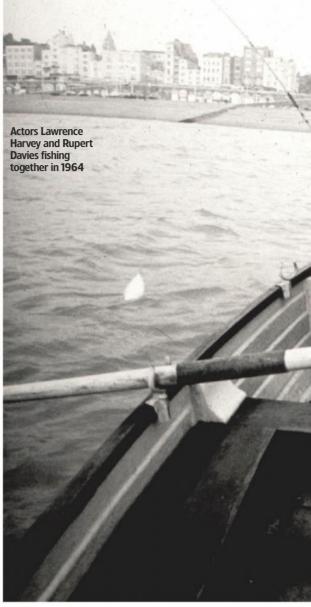
addressed in the second year and, being an ambitious sort, David decided to embark on an assignment documenting the seafaring exploits of an eight-man crew aboard a trawler in the North Sea. 'I wrote to Mac Fisheries and they agreed to let me come out with them,' he explains. 'It was easy in those days – you could just phone up the Ministry of Defence, for example, and say "I hear you're going to blow something up, can I come and photograph it?" and they would say "sure".'

Unfortunately, David was not a natural sailor and he spent the best part of three weeks hurling the contents of his stomach into the sea. 'The boat was pitching around all the time,' he recalls. The crew relished a snack of flatfish fried in fat then salted and dried, which can't have helped his constitution much. Despite these challenges he returned with more than 1,000 negatives, mostly shot with a 35mm Miranda. 'I also took a Linhof Press camera with me, which is probably the worst camera to use

on a trawler,' he laughs. 'I still have the Miranda – I like to hang on to my old cameras.'

Undeterred by his experience, David eventually went on to complete various assignments at sea, and even learnt to scuba dive, fly and skydive. 'I was a freelancer,' he smiles, 'it was dog eat dog. If you could get a picture that nobody else could, then you had a sale.'

Full of confidence, the young graduate left photographic school expecting to be snapped up by a Fleet Street newspaper. At the time, such papers had 50 or 60 photographers on their books, and so his requests for work were rebuffed. 'After about 300 knockbacks, I got a job with a North of England news agency,' he explains. 'It was a pretty rundown outfit in Lytham St Annes.' Suitably humbled, David stayed at the agency long enough to learn the ropes and then moved south to establish himself as a freelance press photographer. For the next 18 months, he supplied pictures to the Evening Argus and the Sussex





You can see images from Lewis-Hodgson's 20-year photographic career in his new book *The Way It Was: A Photographic Journey Through Sixties Britain*, £39.95. To find out more visit www. thewayitwas.uk.



David Lewis-Hodgson in Belfast during The Troubles

Express & County Herald. It was a far cry from the glamorous lifestyle he had envisaged while reading Jarché's book. 'The editor would phone me on a Saturday morning and give me a list of events he wanted covered,' he explains. 'It was pretty mundane stuff: a bowls match, village play, etc.' He was often expected to cover as many as 20 events in a few hours. As a result, he became a master of the grab shot. 'I was quite outrageous really,' he laughs. 'I would rush up to the venue, rush in and snap away. It didn't matter if people were in the middle of something.' The idea was to get as many faces in the pictures as he could, because every face meant an extra sale for the paper.

Some 12 months later David moved to London, and then Paris, where he secured commissions from the likes of *Paris Match*, *Stern* and *LIFE*. Much to his delight, the Fleet Street editors who had rejected him a few months before were now eager to have him on their books. When I first started working in Fleet Street, one of the editors told



known as The Troubles had just begun and he was charged with bringing back a photographic essay showing how the growing violence was affecting the children there. 'I didn't do frontline stuff, I wasn't working for *The Mirror* or anything,' he explains, but over the years, I witnessed many horrific sights. In the 1970s it got much, much worse – it was a dangerous place to be.' On one occasion he was actually kidnapped; thankfully, he was released when a good friend vouched for him.

Towards the end of the 1970s, David had grown weary of photojournalism and wanted to make some sense of the traumatic events he had witnessed. As a result, he retrained as a clinical psychologist. I no longer wanted to photograph conflict, murder and sudden death,' he reveals. In our current climate it's easy to grow nostalgic for what we consider 'the good old days', but our memory can play tricks on us. 'The 60s wasn't all about flower power and drugs,' he confirms. 'It wasn't a golden age by any means. There was a huge amount of poverty, we hung murderers and we imprisoned people who tried to kill themselves. During my 20-year career, I photographed much that was good, much that was not so good, and a great deal that was ugly.'

me about a new pop group who had come down from Liverpool to sign and sell records,' he recalls. 'He said that they wouldn't amount to anything, but I had better go along as they seemed popular with the girls. So I went along and there was only one other photographer there.' The band, of course, was The Beatles. 'They did rather well,' he laughs. The story prompts David to tell me about another occasion when he met John Lennon. 'I was working with a journalist who could only be described as "old school", he reveals. He worked for one of the tabloids. We had both been invited to Lennon's house, so we went along and got chatting with John and Yoko. John asked us what kind of photographs we wanted and the journalist said, "I would like a picture of Yoko making a nice cup of coffee." The upshot was that we were slung out of the house before I had even got my camera out of the case.

In 1969, David joined a features agency off Fleet Street, and was sent to Belfast. The 30-year conflict



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This compact manual-focus prime may be pricey, but it's also wonderful, says **Andy Westlake**

henever Zeiss brings out a new lens, chances are it'll be something special. With the Loxia 25mm f/2.4, however, vou might be forgiven for wondering what the firm is thinking. It's not that this small manualfocus wideangle prime looks undesirable - quite the opposite. However, its £1,190 price tag is significantly higher than Zeiss's own autofocus Batis 25mm f/2, which costs around £1,000 and gives superb results. So why pay extra for a slower lens you have to focus yourself?

The answer, of course, is that many serious photographers value the shooting experience

this brings. The fully manual operation is also advantageous for video work, where it's essential for any adjustments to be smooth and silent. Even so, any f/2.4 manual-focus prime is going to have to be seriously good to justify this kind of price tag.

Features

In Zeiss's idiosyncratically named line-up, its Loxia lenses all come with a common set of characteristics. They're fully manual primes designed for use on Sony's full-frame mirrorless cameras, and combine top-notch optics with compact size and high-quality

weather-sealed construction. The 25mm f/2.4 is the fifth lens in the series, and all share the same 62mm barrel diameter and 52mm filter thread, along with matching cosmetic designs.

Of a Distagon-type retrofocal design, the Loxia 25mm f/2.4 has 10 elements arranged in eight groups. Two anomalous partial dispersion glass elements are used to combat chromatic aberration, while an aspherical element suppresses curvilinear distortion. Zeiss's T* coating minimises flare and ghosting, and a petal-type metal hood is supplied.

Aperture operation is completely manual, using a ring on the lens that stops the aperture down directly as it's turned. This means you always get a completely accurate depth-offield preview in the viewfinder. However, only aperture-priority or fully manual-



exposure modes are available, and you can't change the aperture using the electronic dials on the camera body.

The diaphragm itself is formed of 10 straight-edged blades that form a distinctly decagonal shape when it's stopped down. This may seem odd in an age when almost every new lens boasts a circular aperture for attractive bokeh, but it's of little consequence. This kind of relatively slow wideangle won't give much in the way of background blur anyway.

While the lens may look just like an old-fashioned manual-focus prime, in one crucial respect it's quite different. A set of electronic contacts in the mount transfers key information back to the camera, so the selected aperture is always displayed in the viewfinder and recorded in EXIF data. The lens also recognises when its focus ring is turned, and can trigger magnified

view in the camera's viewfinder for as accurate focusing as possible. Last but not least, the focal length is passed to the camera body for inclusion in the EXIF and to ensure the in-body image-stabilisation system works correctly.

Build and handling

We've come to expect superb build quality from Zeiss, but if anything the Loxia feels a step above the firm's Batis and Milvus designs. The entire outer barrel is made from metal, including the manual-focus and aperture rings, which have finely ridged, tactile grips, along with engraved distance, depth-of-field and aperture markings. To round things off, a blue silicone seal around the mount protects the interface with the camera from dust and water ingress. Overall, this lens feels like a very special, lovingly crafted tool.

The manual-focus ring covers the front twothirds of the barrel, including the area in front of the ridged grip itself. It rotates very smoothly with just the right amount of resistance. The grip falls naturally into your fingers, so you'll never be fumbling to locate it in a hurry.

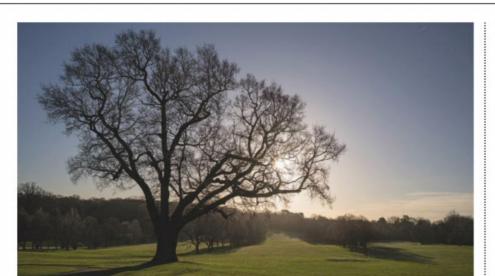
Pull your fingers back towards the camera body and you'll easily locate the slimmer aperture ring, which clicks at one-third stop detents. Again, the stiffness of the clicks is perfectly judged, so you're unlikely to change settings inadvertently. If you prefer a smoothly rotating aperture ring, then rotating a small screw that's inset into the lens mount through 180° will de-click this control, and a tool is provided in the box for just this purpose.

If I have one small criticism of the handling, it's that there's little non-rotating real estate on the barrel to grasp when attaching or removing the lens. This makes changing lenses a bit slower and more awkward than it should be.

Focusing

The focus ring rotates 90° from the infinity position to the minimum object distance of 25cm, which gave sufficient control for really precise focusing. The entire optical unit shifts backwards and forwards by a few millimetres in the process – an approach that Zeiss says should give maximum sharpness but which is generally impractical on autofocus lenses, as they demand small, light internal focus groups to maximise AF speed. I set the camera to activate 10x magnified live view when I turned the focus ring, and found this made it easy to achieve perfect focus, shot after shot. With manual focus implemented this well, I barely missed having autofocus at all.





There's barely any hint of flare when shooting directly into the sun Sony Alpha 7 II, 1/5000sec at f/8, ISO 100

Performance

At the start of this review, I stated that any manual-focus lens offering an f/2.4 aperture for nearly £1,200 had better be seriously good, and luckily that's just what the Loxia is. It's more accurately described as sensational.

Sharpness is phenomenal. Even when shooting at f/2.4, the level of detail recorded in the centre of the frame matches many other lenses at their best aperture. It's only in the extreme corners that there's any obvious degree of smearing. Close down to f/8 and the lens delivers the kind of corner-to-corner excellence that's the preserve of only the very finest optics, easily satisfying the demands of the 42.4MP sensor in the Sony Alpha 7R II and III.

Other lens flaws are notable mainly by their absence. If you pixel-peep, you'll find some colour fringing in out-of-focus areas at f/2.4 due to longitudinal chromatic aberration, and a little in the corners from the lateral variety. But it's trivial to fix in post-processing. Meanwhile, distortion is nearly perfectly corrected, with just the slightest hint of barrel-type curvature in lines placed along the long edges of the frame. Activate in-camera distortion compensation and it disappears completely.

Point the lens directly into the sun and it's completely unfazed, with barely any hint of flare. At small apertures you'll see 10-ray sunstars from the 10-bladed aperture diaphragm.

This just leaves vignetting, which is noticeable wide open, but becomes almost imperceptible on stopping down to f/5.6. There's a school of thought that any vignetting counts as a flaw for which a lens should be criticised, but I don't subscribe to this view at all. I prefer to consider vignetting as an optical characteristic, which in the right circumstances can enhance your shots. On the Loxia, the edge-darkening effect is quite gradual and visually pleasing, and on more than one occasion I deliberately shot at f/2.4 to exploit its aesthetic quality, safe in the knowledge that I wasn't compromising detail along the way.

Verdict

With lenses such as the Zeiss Loxia 25mm f/2.4, you either get the idea or you don't. For the vast majority of photographers, its sibling, the Batis 25mm f/2, is likely to be the more obvious choice – it gathers more light, supports autofocus, and costs less. Others who use the mighty Sony FE 24–70mm f/2.8 GM zoom lens will probably struggle to rationalise the purchase of a £1,170 lens that's not quite as wide and only half a stop faster.

However, if you prefer shooting with small, lightweight prime lenses, value the process of setting the aperture and focus yourself manually, and demand the highest-possible optical quality, then the Loxia 25mm f/2.4 won't disappoint. Clearly, it's not for

everybody; indeed perhaps it's for hardly anybody. But it's an absolutely sensational lens with lovely handling and optics to die for, and there's nothing else quite like it on the market right now.



Data file

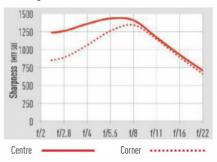
Price £1,189.99
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Lens elements 10
Groups 8
Diaphragm blades 10
Aperture f/2.4-f/22
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Length 69.5mm
Diameter 62mm
Weight 375g
Lens mount Sony E
[full-frame]

Amateur Photographer Testbench GOLD * * * * *

Zeiss Loxia 25mm f/2.4

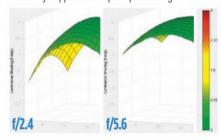
Sharpness

On the 42.4MP Sony Alpha 7R II, the lens gives a stunning set of MTF50 measurements in our Image Engineering tests. It's impressively sharp in the centre at f/2.4, and gradually improves on stopping down, reaching its peak around f/5.6. The corners start off some way behind but sharpen up more quickly, such that, at the optimum aperture of f/8, they very nearly match the centre. Diffraction softening becomes noticeable at f/16.



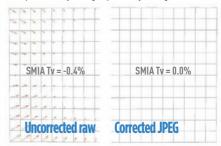
Shading

Not unusually for a full-frame prime, vignetting is quite obvious at maximum aperture, with almost two stops' fall-off in the corners when the lens is set to f/2.8. At f/4 this decreases to 1.2 stops, then settles at a value of almost exactly one stop at smaller apertures. If you consider this problematic, it's easily suppressed in post-processing.



Curvilinear distortion

If you shoot in raw with lens corrections disabled, the Loxia reveals a tiny amount of barrel distortion, which is rarely evident in real-world shooting. However, the lens can pass correction data to the camera to correct this, so if you turn on distortion compensation you'll get perfectly straight lines.



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Fujinon XF 80mm f/2.8 R LM OIS WR'Macro

Fujifilm's X-series has been missing a true 1:1 macro lens for quite some time. Michael Topham finds out if this is a close-up specialist's dream lens

ujifilm has always been open about its plans to release new lenses. Every so often, we're told that the firm's roadmap has been updated, which usually offers a great clue as to what's around the corner. One lens that has been on the cards for guite some time is the XF 80mm f/2.8 R LM OIS WR Macro. Unlike Fuiifilm's wider XF 60mm f/2.4 R Macro, it presents true 1:1 magnification and doesn't require extension tubes such as the Fujifilm MCEX-11 or MCEX-16 to photograph the world in minute detail. It's an

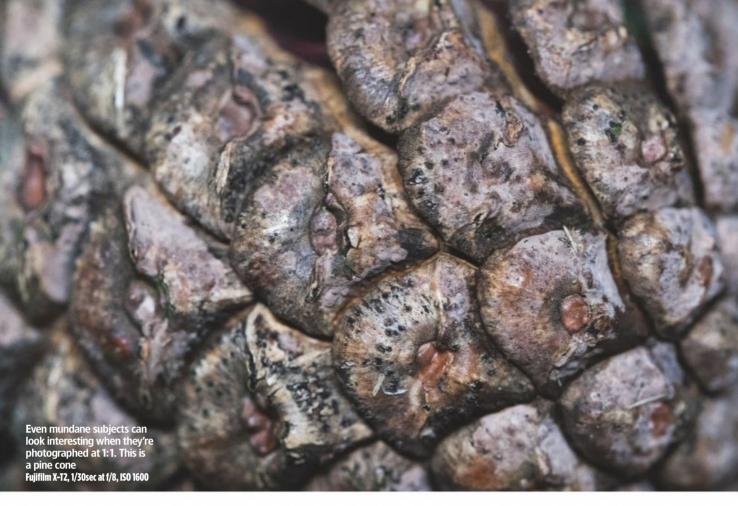
optic that many keen close-up X-series photographers have been waiting for and fills a missing link in Fujifilm's X-mount lens line-up.

Features

Although some lenses are labelled 'macro', not all are true macro lenses because they don't reproduce an image of a subject at lifesize. One example is Fujifilm's XF 60mm f/2.4 R Macro, which delivers a maximum magnification of half-lifesize (0.5x). The big attraction of this new lens is its minimum focus distance (25cm)

and full-scale 1:1 reproduction ratio. With the 1.5x crop factor taken into consideration, the focal length is equivalent to 122mm in 35mm terms. This sees it nestle between the superb XF 56mm f/1.2 R and XF 90mm f/2 R LM WR lenses, which are equivalent to 84mm and 137mm respectively. At £1,249, the XF 80mm f/2.8 R LM OIS WR Macro is £450 more than the XF 56mm f/1.2 R and £400 more than the XF 90mm f/2 R LM WR at the time of writing. With a four-figure price tag, it's a premium macro and is currently the most expensive fixed-focal-length X-series lens.

Optically, the lens's construction is made up of 16 elements in 12 groups, including one aspherical lens, one Super extra-low dispersion (ED) lens and three additional ED lenses. The purpose of Fujifilm's ED lenses is to reduce chromatic aberrations, while delivering clear colour reproduction, strong sharpness and high contrast. To make sure the lens renders circular bokeh at wide apertures.



Fujifilm has designed it with nine aperture blades and a rounded diaphragm.

Not only is it the only Fujifilm X-mount prime currently to offer optical image stabilisation, allowing users to shoot handheld at five stops slower than would otherwise be possible, the lens also features a floating focus system with two focus groups. Plus, there's the option to set the lens to 0.25m-0.5m or 0.5m-infinity.

As a weather-resistant lens, there are 11 seals against rain, dust and moisture, and it has been designed to operate as low as -10°C.

There's a 62mm filter thread, and the front element has a fluorine coating, making it less susceptible to smudges, water and dirt, and further improving its durability.

Autofocus

Focusing is of the fly-by-wire type and it was only when it was used in the studio, where you

could hear a pin drop, that I became aware of a subtle, high-frequency whir when focusing across its full focus distance.

What's more obvious is the hiss the lens makes when the OIS is set on or off. Hold the lens to your ear or use it where there's barely any ambient sound and you'll hear it. This doesn't rule it out for video, but in extremely quiet surroundings a camera's built-in microphone would pick it up. With such a large focus distance range to cover, it's not the fastest focusing X-series prime. In use, I found that refining the size of the AF point and using the focus-distance switch helped to minimise extensive focus shifts and improved response.

Build and handling

The design of the lens isn't too dissimilar to the XF 90mm f/2 R LM WR, albeit 25mm longer and 5mm larger in diameter. It has a fairly thin

The lens struggled to autofocus on this water droplet, so I reverted to manual focus Fujifilm X-T2, 1/180sec at 1/5.6, ISO 1000

'There are 11 seals against rain, dust and moisture'

aperture ring set towards the rear and a large, finely grooved manual-focus ring located just in front. The rubberised focus ring operates smoothly and the aperture ring notches through its range in 1/3-stop increments. It has a firmer resistance than the focus ring and rotating it anti-clockwise beyond f/22 sets it to its automatic setting. Offset to the side of the barrel you'll find the focus distance and OIS switches. As lens switches go, they're fairly small and, like sections of the barrel, these are made from plastic as opposed to metal.

The overall standard of construction is high, but for a lens as expensive as this is, you would expect it to have an all-metal barrel. Handle it and compare it side by side with the XF 90mm f/2 R LM WR and you'll notice the barrel of the latter feels more robust.

Practically, using plastic in the construction helps keep it lightweight (750g) for its size. The pronounced clunking the lens makes when it's tilted might send alarm bells ringing as it's taken out of the box. However, this is quite common with image-stabilised lenses.

When reversed, the lens hood hugs the barrel and provides good protection when it's being transported. The weather seal around the metal mount also does a good job.

Image quality

Plenty of photographers will forgive the lens not having a metal barrel, as long as it makes up for it in image quality. The good news is that the lens does just that, producing a fine set of



There's a negligible amount of vignetting at maximum aperture Fujifilm X-T2, 1/180sec at f/2.8, ISO 1250

lab results, which were backed up with good levels of sharpness in close-up images captured on the X-T2. Studying the graph from our Image Engineering tests clearly indicates that by closing the lens down from its maximum aperture towards f/4, there's a notable improvement in centre sharpness, with corner sharpness figures peaking between f/5.6 and f/8. For optimum sharpness across the frame and in low-light situations where you're not forced to shoot at f/2.8, users will benefit from stopping the lens down. Though the figures tell us corner sharpness is fractionally better at f/11 than at f/2.8, the introduction of diffraction does begin to soften fine detail - something that became obvious when studying shots taken at f/16 and f/22 under close scrutiny.

Fujifilm uses software correction to reduce shading in its cameras' JPEG output, but even when looking at uncorrected raw files, it's easy to see that shading from this lens is very low indeed. We measured just 0.5EV with the aperture wide open at f/2.8 and stopping down to f/5.6 eradicates any shading entirely. When it's used as a portrait lens, some users may find themselves adding vignetting during postprocessing to encourage the viewer's eye to the centre of the frame.

Medium-telephoto primes are known to perform well when it comes to distortion and the XF 80mm f/2.8 R LM OIS WR Macro is no different. Our tests reveal the smallest amount of pincushion distortion, even when studying raw files with all corrections turned off, but a figure of 0.1% really isn't anything to worry about in real-world use. As reported in the past when we've tested other X-mount lenses, Fujifilm delivers correction for raw files via lens-specific metadata. This is automatically accessed by the raw converter you use to correct or mitigate common optical phenomena and is the reason Fujifilm lenses aren't listed under lens profiles in Camera Raw or Lightroom.

Verdict

The Fujinon XF 80mm f/2.8 R LM OIS WR Macro presents the opportunity to shoot the tiniest subjects from close distance while delivering respectable image quality. By utilising focusing aids such as live view, focus peaking and Fujifilm's split image manual focusing feature, pin-sharp macro shots have never been easier to take.

The optical image stabilisation system is effective at suppressing handshake, and the lens is also handy for shooting portraits. Personally, though, I'd be tempted to buy the XF 90mm f/2 R LM WR or XF 56mm f/1.2 R ahead of it for this purpose and put the $$\pm450 saving towards something else. When it comes to price, it's expensive in comparison with other medium telephoto

macro lenses. What Fujifilm really needs to do now is produce its own macro flash unit, which would confirm that the manufacturer is 100% behind supporting X-series users who specialise in close-up photography.



Data file

Price £1,249
Filter diameter 62mm
Lens elements 16
Groups 12
Aperture f/2.8-f/22
Minimum focus
distance 25cm
Dimensions
80x130mm
Weight 750g

Lens mount Fujifilm X-mount

Included accessories Lens cap, lens rear cap, lens hood

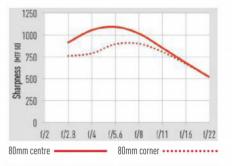
Amateur
Photographer
Testbench
Recommended

* * * *

Fujinon XF 80mm f/2.8 R LM OIS WR Macro

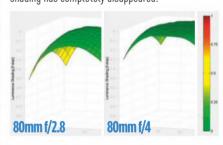
Resolution

The lens produces good sharpness in the centre of the frame wide open at f/2.8, which gets better as the aperture is stopped down. The solid red line that indicates centre sharpness peaks very close to f/5.6, with edge sharpness (indicated by the dotted red line) improving gradually as it's closed from f/4 to f/6.3. To acquire optimum sharpness, use the lens between f/4 and f/8. Push past f/11 and diffraction reduces sharpness quite dramatically.



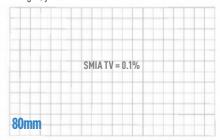
Shading

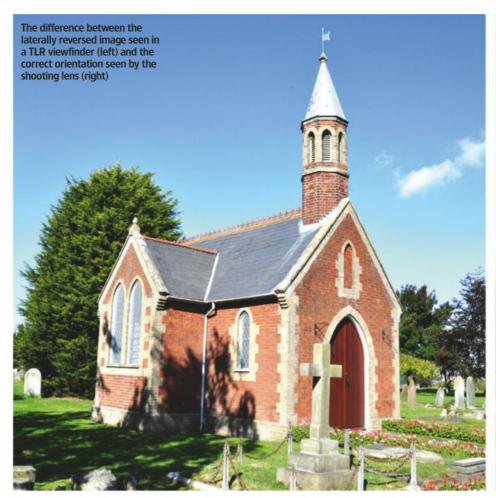
Corners appear approximately 0.5EV darker than the centre of the frame when the lens is used at f/2.8. This is a very low shading figure and I found it neither disturbing nor intrusive when I inspected my close-up shots. Closing the lens down to f/4 reveals the edge of the frame is just 0.3EV darker than the centre, and by f/5.6 all trace of corner shading has completely disappeared.



Curvilinear distortion

Unlike zooms, medium telephoto lenses are designed to excel at one focal length and tend to be well corrected for distortion. The 80mm is an excellent example of its type. As it's clear to see on our distortion chart, horizontal and vertical lines don't suffer from any bowing and they're perfectly straight, just as we'd like to see.







ning twins

John Wade takes us into the fascinating world of twin lens reflex cameras dating from 1934 to 1967

he twin lens reflex (TLR) was once one of the most popular types of camera for amateurs and professionals alike. Most conform to a rigid body design made for 120 film with two fixed lenses, one above the other. The lower lens takes the picture, and the upper one reflects a same-size image onto a focusing screen under a hood on top of the body. The lenses are coupled to focus in tandem.

Exceptions to this style include some that for 127 or even 35mm film. Photographic history has also seen T. Parillinia allow interchangeable lenses and others made history has also seen TLRs that had viewfinder gimages smaller or larger than the film image, a few folding designs, and a small number that Figure placed the lenses side by side.

The most popular TLR design began life as the Heidoscop, a stereo camera made by the German Franke and Heidecke company in 1921. It took glass plates and used three lenses: two for the stereo image, and one between them to reflect its image to a viewfinder on top of the body. In 1926, a rollfilm version called the Rolleidoscop was made. In 1928, the company took that camera, turned it on its side, removed one of the lenses and shifted the viewfinder to the top of the now upright body. So was born the Rolleiflex – the first truly compact rollfilm TLR.

This style was copied by manufacturers around the world. Today, there are secondhand TLRs available to suit every pocket, from super-expensive Rolleiflexes that still demand

in excess of £1,000, to budget models such as the Chinese Seagull or the Russian Lubitel, which can be bought for £20-£50.

Choosing and using a TLR

Before buying a TLR, keep a couple of things in mind. Choose one that takes 12 6x6cm pictures on 120 film, and check that the viewing and shooting lenses move together for coupled focusing. To shoot, hold the camera at waist level to view the whole scene on the screen. Then, use the flip-up magnifiers found in most TLR hoods close to the eye for fine focusing.

Keep in mind that the image on the focusing screen is laterally reversed: objects that move left to right in front of the camera will move right to left on the screen. Allow for parallax differences between the two lenses; this means the shooting lens sees less at the top and more at the bottom of the picture than the viewing lens sees.

When working close to the subject, a TLR's viewfinder image (below) might seem okay, but the shooting lens sees less at the top and more at the bottom of the image (bottom)





THE CAMERAS





Mamiya C3

LAUNCHED 1962

FORMAT 12 6x6cm images

GUIDE PRICE £120-£150

Unlike most twin lens reflexes, the Mamiya C3 takes interchangeable lenses, and because it's a TLR, they come in pairs: one to take the picture, one to supply the viewfinder image. Focal lengths range from 55mm wideangle to 250mm telephoto. Each lower lens of the pair incorporates the shutter.

The C3 is also unusual in using bellows to focus the twin lenses, with extra extension for closer-thannormal focusing. The waist-level viewfinder hood includes a front window and rear sight for eye-level use, adapted with masks for different lens focal lengths. The waist-level finder can be swapped for a range of prism and Porroflex eye-level viewfinders, some of which incorporate CdS metering.

Roll film is wound through the camera with a crank that, once loaded in the correct way, automatically

stops at each frame position.
A special back for individual exposures on sheet film can also be fitted.

Pairs of interchangeable lenses for the Mamiya

Rolleiflex 2.8F

LAUNCHED 1960

FORMAT 12 6x6cm images

GUIDE PRICE £800-£1,500

No round-up of TLRs would be complete without a Rolleiflex – and this is one of the best, even though it might be prohibitively expensive. It's a semi-automatic camera with a built-in selenium cell meter that drives a needle built into the focusing knob. Shutter speeds of 1/2-1/500sec and



apertures of f/2.8-f/22 are set by small thumbwheels on either side of. and between, the twin lenses, with readouts shown in a window above the viewing lens. Jugalina the speeds and apertures to line up the meter needle against a moving arm

ensures correct

exposure.

Rolleiflex 2.8F: expensive but guaranteed to produce top-quality images

Microcord

LAUNCHED 1952

FORMAT 12 6x6cm images

GUIDE PRICE £50-£90

A few years after Franke and Heidecke launched the original Rolleiflex, the company introduced the start of a series of strippeddown, less expensive versions called Rolleicords. They were widely copied. This English version was made by Micro Precision Products (MPP). There were two models with







THE CAMERAS



Welta Perfekta

LAUNCHED 1934

FORMAT 12 6x6cm images

GUIDE PRICE £250-£300

Only four folding TLRs were ever made, and two of them were manufactured by Welta-Kamera-Werke in Germany. Folded, the Perfekta measures only 7cm. tapering to 6cm deep. But pressing a stud on the side springs a panel containing the two lenses forward to the shooting position. A lever beside the lower lens rotates it for focusing, while the upper lens moves in and out to match focus on the viewfinder screen. Shutter speeds of 1-1/300sec and apertures of f/3.5-f/22 are set around the taking lens. Welta also made the Superfekta for 6x9cm images and a revolving back for portrait- or landscape-orientated pictures.

Welta Perfekta: one of the very few folding TLRs



FORMAT 12 6x6cm images

GUIDE PRICE £50-£70

A sign of how far around the world Rolleicord-influenced designs travelled is obvious in this TLR, which began life in China as the Shanghai before being exported under the Seagull name. While the Chinese mechanics and optics might not totally match the standards of the camera's German cousins, the quality of both is still high, and a Seagull makes an ideal introduction to mediumformat TLR photography. A knob on the side moves the lenses back and forth for focusing. Shutter speeds of 1-1/300sec and apertures of f/3.5-f/22 are set on each side of the shooting lens.

> Seagull 4: an ideal inexpensive route into medium-format TLR photography





Yashica 44LM

LAUNCHED 1959

FORMAT 12 4x4cm images

GUIDE PRICE £50-£70

Although 120 has always been the preferred film size for a TLR, a significant range of 127 film models was also made - a few in Germany, but mostly in Japan. They are usually about two-thirds the size of a 120 film model. On the 44LM, the needle of a top-mounted selenium cell meter offers numbers from 0-10, which are set on a dial within the film wind knob to indicate apertures of f/3.5-f/22 against shutter speeds of 1-1/500sec. The indicated exposure is then set manually. The twin lenses are focused together by a knob on the side.

Yashica 44LM: one of a select few TLRs made for 127 film



Samocaflex 35 - an unusual 35mm TLR from Japan

Samocaflex 35

LAUNCHED 1955

FORMAT 36 24x36mm images

GUIDE PRICE £200-£300

A few TLRs were made for 35mm film, and this Japanese version is one of the best. It resembles a traditional 35mm camera of the time, but with the addition of an extra lens that reflects its image to a small viewfinder screen under a hood on the top plate. The camera also features an eye-level optical viewfinder. As a radial arm beside the shooting lens is rotated, both lenses move backwards and forwards for focusing. Shutter speeds of 1–1/500sec and apertures of f/2.8-f/16 are set on each side of the shooting lens.

TLR names to watch for

120 film

Delmonta Foth-Flex Mamiyaflex Microcord Minolta Autocord Ricohflex Rolleicord Rolleiflex Seagull Semflex Voigtländer Brillant Voigtländer Superb Welta Perfekta Welta Superfekta Yashicaflex Zeca-Flex Zeiss Ikon Ikoflex

127 film

Baby Rolleiflex Pilot Primo Jr Ricoh Super 44 Yashicaflex 44 Series

35mm film

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Hähnel ProCube 2

Andy Westlake tests Hähnel's latest dual battery charger

• £69.99 • www.hahnel.ie LCD screen Displays battery status and how much charge has been added to each.

Each kit comes with several interchangeable holders for different battery types.

Exchangeable plates

At a glance

- Charges two Li-ion batteries
- Magnetic clip-on 4x AA battery plate
- Mains or in-car charging
- Available for all main brands

IF THERE'S one thing we can't get enough of in the digital age, it's electricity. In contrast to old manual film cameras that could operate without a battery, it's now impossible to record an image if you have no juice left to fire the shutter. And while DSLRs tend to have greater stamina than compacts or mirrorless cameras, only the most over-confident of photographers would venture out for a day without a spare battery.

Almost invariably, though, cameras are only supplied with the means to charge a single battery, meaning it's not easy to replenish two at the end of a shoot. For this, your life is made much easier by a dual charger such as this Hähnel ProCube 2. It's an update to the original ProCube, which we liked a lot and gave our top 5-star rating back in February 2014.

This latest model is based on the same concept, with a sturdy metal body shell and interchangeable plates that each accept a pair of batteries. But it gains a few neat updates; the battery holders now simply clip in place, without the need to plug in a fiddly connector wire, and the LCD display shows how much charge has been fed to each battery. You also get a plate for charging four AA batteries, which fixes magnetically onto the top of the

unit; however, this means it can't be used when you have Li-ion batteries installed.

Versions are available for Canon, Nikon, Olympus, Sony, and Fujifilm/Panasonic, each coming with several battery plates to cover a wide range of cameras. For example, the Sony version I received for review has plates for the NP-BX1 used in RX100-series compacts, the NP-FW50 employed by RX10-series bridge cameras and most Sony mirrorless models, and the new NP-FZ100 for the Alpha 9 and Alpha 7R III. One minor concern is that the plates are changed using a small tool that's akin to those used to install SIM cards into phones, but there's nowhere to store it, meaning it could easily be lost.

Verdict

Since we reviewed the original ProCube, many inexpensive twin chargers have appeared online, which might make this new model appear outdated and overpriced. But it's still a supremely versatile, well-made and robustfeeling piece of kit. Crucially, it's also fast: it can fully charge a Sony NP-FW50 from empty in a little over an hour, which is considerably quicker than in-camera charging. So it's still very much worth considering, especially if you use multiple cameras from the same brand.

USB output

A high-power 2.4A USB output will charge phones or tablets once the camera batteries are full.

GOLD

Power in

Comes with an in-car

charger and a mains charger supplied with UK, US

and EU plugs.

ALSO CONSIDER

Canon and Nikon users looking for a travel-friendly dual charger should also take a look at Hähnel's

'Extreme Power Kit'. This compact dual charger takes two Li-ion batteries. and uses a Micro USB power input. The HLX-E6N version will charge two Canon LP-E6 type batteries, while the HLX-EL15HP model accepts Nikon EN-EL15 batteries. as used by the respective firms' high-end DSLRs.



TechSupport

Email your questions to: ap@timeinc.com, **Twitter** @AP_Magazine and #AskAP, or **Facebook**. **Or write to** Technical Support, Amateur Photographer Magazine, Time Inc. (UK), Pinehurst 2, Pinehurst Road, Farnborough Business Park, Farnborough, Hants GU14 7BF

Flash adapter problem

I have a Nikon D90 and a Metz MZ 1 flash unit on the flash; I also use a Nikon adapter 32002. The problem is the flash and camera are not working together. What am I doing wrong? I've put the camera on auto mode and set the flash to easy mode, but to no avail. It just overexposes. Help!

Pat Sexton

I'm having trouble researching your problem based on the supplied information. If you can provide more precise details of the flash unit model name and the adapter I would be delighted to help. Metz model names and numbers are confusing at the best of times, but so far I have been unable to identify an MZ-1 model that pairs with a 32002 adapter. The Metz SCA adapter designed to work with your Nikon D90 is the 3402 model. '3002' refers to the range of adapters, of which the 3402 is a member. There is a 3202 SCA adapter, but this is for Olympus cameras and would definitely not work properly with your D90. If it transpires that you have a '3202' adapter, you could try to find a 3402 adapter. But frankly this would almost certainly not be cost-effective compared to buying a new, much more modern, inexpensive dedicated flash of similar power from Nissin. Yongnuo or other brands.



The Metz SCA 3402 adapter module is designed to work with the D90

Precision of zoom lens focal lens markings

I have used a variety of brands of cameras and lenses over the years. I've found that what the focal length marking on a zoom lens suggests to be the field of view can be surprisingly different compared to another lens set to the same focal length and, indeed, to a prime lens of the same focal length. I know that fields of view and sensor/film frame size are interrelated, so my observations are with the same frame size and the same camera. Is this just slapdash engineering of zooms or is there a more eloquent explanation? Henry Elsworth

Yes, you are observing a phenomenon with zoom lenses called 'breathing'. In fact, breathing can also be observed with primes. Lens 'breathing' is a trait exhibited to a greater or lesser degree by the optical design of a lens. A perfect pin-hole camera, which is entirely theoretical, doesn't need to focus – everything from close-up to infinity can be regarded as in focus. With real-life camera lenses that need to focus at different distances. the field of view can change slightly according to the distance focused. The optical-design compromises with zoom lenses exacerbates this trait in varying degrees. Some zoom-lens designs minimise breathing very effectively over the focal length zoom range, while others don't.

Breathing is a particularly unwelcome characteristic for videographers as the symptom is much more noticeable than with still photography. You will find that both zoom and prime lenses are closest to their marked focal lengths when focused to infinity.

Q&A compiled by Ian Burley



You should be able to control the TZ100 using your iPad Pro

Apple iPad Pro and camera compatibility

I'm thinking of buying a camera after a number of years. In my travels in the past I used a Minolta AutoPak 470. It did what I wanted it to do. I would now like a simple do-it-all modern pocket camera (travel cam), on the lines of the Panasonic Lumix DMC-TZ100 or TZ90. But it needs to be compatible with my Apple iPad Pro. I could settle for a cheaper camera, but would like a Panasonic. What would I have to do to get a Panasonic on my Apple? I am now 78 years old, but not obsolete. **Robert C Ingram**

Have no fear! Almost all new travel cameras can communicate wirelessly with both Android and Apple smartphones and tablets. This is usually via Wi-Fi, supported by a dedicated app which can be downloaded and installed for free from the App Store for your device. There have been several apps for Lumix cameras over the years, but the one to use with a TZ range camera is the Panasonic Image app. This enables you to view, on your iPad screen, what the camera's live view screen displays. You can also remotely control the camera using your iPad, as well as import photos and video that have been shot on the camera. This is a convenient way of sharing photos and videos with social media networks if you use them. Another possible benefit is location tagging. The TZ100 doesn't have built-in GPS, but the Panasonic Image app can use its host device's own GPS to tag the location of photos you take. The catch with Apple devices is that if your iPad does not have cellular/mobile data support, it doesn't have GPS. It has to be said that using apps like Panasonic Image can be frustrating. Many people have problems connecting their phones and tablets to their cameras because of Wi-Fi issues. It takes some practice to understand what you need to do to avoid connection problems by doing things in the right way. We would definitely recommend the TZ100 over the TZ90; it's a little bigger but has a 1in sensor, which is substantially larger than the TZ90's 1/2.3in sensor, and so able to produce cleaner images with greater tonal depth, especially in low light.

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Tech Talk

Professor Newman on...

great diffraction

Are more megapixels actually a disadvantage when using small apertures? Prof Newman dispels this myth

n recent years, there has been a run of camera releases featuring high-pixel-count sensors. The least pixel-rich of these is the Sony Alpha 7R Mark III at 42MP - somewhat overshadowed by the 45MP Nikon D850 and the 100MP and 400MP releases in the Hasselblad H6D range.

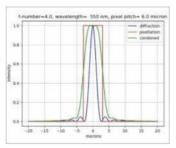
Whenever such a release occurs, it is accompanied by comments on web forums that these high megapixel counts have restricted usefulness owing to a phenomenon called 'diffraction limiting'. The thesis put forward is the small pixels cause such cameras to perform worse at large f-numbers. I think this particular meme started on a very popular photographic website, which even has an interactive calculator to let worried photographers predict when their camera will become 'diffraction limited'. While the internet is a wonderful and rich

0.8

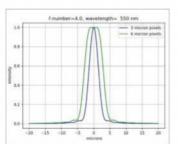
source of information, it is also responsible for false information spreading like wildfire and this is, fortunately, false. There is indeed a phenomenon known as 'diffraction limiting', and it describes the state in which the resolution of an optical system is essentially determined by diffraction. Indeed, it can occur in small-pixel cameras with good lenses, but that is a good thing – it means the camera is extracting all the information that the lens can provide.

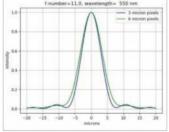
High-MP versus low-MP cameras

Diffraction is a phenomenon whereby an aperture will 'spread out' a light ray due to the interaction of the light waves at different parts of the aperture (another false idea that is common is that it is due to photons 'bouncing off' the edges of the aperture). The smaller the aperture, the more the light is



At f/4, a small pixel (above left) resolves much finer detail than a larger one





At f/4 the difference is significant, but even at f/11 the small pixel is better

into a characteristic pattern called 'the Airy disc'. To understand how this interacts with pixellation, it is necessary to know how different sources of blur interact. The 'diffraction-limiting' thesis is based on the idea that Airy discs become invisible if the pixels are large enough to hide them; hence with large pixels diffraction is not so visible. This isn't the manner in which pixellation and diffraction interact, which in reality is described by a mathematical process called convolution, or one mathematical function 'running over' another. This is shown in the illustrations below left. In the upper two, we can see the 'point-spread' function (just a slice through the brightness profile) of the Airy disc and the pixel. In each chart the point-spread function for the Airy disc is shown in blue and that for the pixel in red. The convolution of the two together is shown in green. As can be seen, the effect of the pixellation blur is to spread out the point spread function of the Airy disc. At no time does the Airy disc simply 'hide' behind a pixel. The larger the pixel, the more the disc is spread. This is very noticeable at f/4, where the large pixel results in a significant loss of resolution. It still occurs, but with less effect at f/11, where the diffraction blur is greater. The lower two charts compare the total blur for the small and large pixel at f/4 and f/11. As can be seen, the small pixel produces less blur in both cases, though its advantage is marginal at f/11.

spread. A point source is spread

So, in summary, there is no need to fear that high megapixel cameras will produce worse results than low megapixel ones at small apertures. It just isn't true.

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Bob Newman is currently Professor of Computer Science at the University of Wolverhampton. He has been working with the design and development of high-technology equipment for 35 years and two of his products have won innovation awards. Bob is also a camera nut and a keen amateur photographer

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MINOLTA 28mm f2.8 M ROKKOR FOR CLE / CL LEICA MEXC++ £375.00
LEICA 28mm f2.8 ELMARIT BLACK WITH HOOD MINT- £895.00
LEICA 40mm f2 SUMMICRON C FOR CLE / CL FOR M MINT - £395.00
LEICA 35mm f3.5 SUMMARON M WITH LEICA FILTER MINT- £325.00
LEICA 5cm f2.8 COLL ELMAR MINT- £295.00
LEICA 90mm f2 COLLAPSIBLE SUMMICRONMINT £375.00
LEICA 50mm f2 CLOSE FOCUS SUMM + SPECSEXC++ £595.00
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LEICA 5cm f3.5 ELMAR RED SCALEMINT £345.00
LEICA 90mm f4 ELMAR C FOR CLE / CL LEICA M MINT- £295.00
LEICA 90mm f4 ELMAR M MOUNT MINT- £165.00
LEICA 135mm f2.8 ELMARIT M 11829 WITH CASEMINT BOXED £375.00
LEICA 135mm f4.5 HEKTOREXC+ £75.00
VOIGTLANDER 25mm f4 SNAPSHOT SKOPAR SCREWMINT £195.00
VOIGTLANDER 35mm f2.5 MC COL SKO WITH M RINGMINT £275.00
VOIGTLANDER BESSA L BODY CHROMEMINT £129.00
VOIGTLANDER BESSA T WINDERMINT BOXED £149.00
VOIGTLANDER VC METER IIMINT BOXED £175.00
VOIGTLANDER BESSA R GRIP FOR R,R2,R3 ETCMINT BOXED £49.00
LEICA 35mm f3.5 SUMMARON SCREW IN KEEPER MINT- £375.00
LEICA M2/M3 BROWN LEATHER CASE WITH STRAPEXC++ £65.00
LEICA 5cm f2 SUMMITAR COLLEXC++ £275.00
LEICA 135mm f2.8 ELMARIT M WITH SPECSEXC+++ £299.00
LEICA 135mm f4.5 HEKTOR + HOOD M MOUNTEXC++ £99.00
LEICA 135mmf4.5 HEKTOR IN KEEPEREXC++++ £199.00
LEICA FIT DALLMEYER 13.5CM F4.5 DALRACEXC+++ £375.00
LEICA 90mm f4 ELMAR BLACK SCREWEXC++ £145.00
LEICA 135mm f4.5 HEKTOR + HOOD SCREWEXC++ £99.00
LEICA SF20 FLASH FOR M6 etcMINT BOXED £89.00
LEICA FONOR BLACK RANGEFINDERMINT-CASED £175.00
LEICA R7 CHROME BODYMINT- £365.00 LEICA R8 MOTORDRIVE 14313 & CHGR 14424MINT BOXED £295.00
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LEICA 50mm f2 SUMMICRON 3 CAMMIN1-BUXED £395.00
LEICA 90mm f2.8 ELMARIT 3 CAMMINT- £379.00
LEICA 180mm F2.8 ELMARIT R 3 CAMEXC++ £345.00
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BRONICA ETRSi WITH 75mm PE, PRISM FDR & BACK	MINT £345.00
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BRONICA 110mm F4 MACRO LENS PS	MINT- £295.00
BRONICA 150mm F3.5 ZENZANON E MC	
BRONICA 150mm F4 E	MINT- £89.00

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RONICA POLAROID BACK FOR ETRSI, ETRS ETC	MINT BOXED £59.0
RONICA AEII METERED PRISM	EXC+ £75.0
RONICA PLAIN PRISM FOR ETRS/ETRSI	MINT £75.0
RONICA PLAIN PRISM FOR ETRS/ETRSI	EXC++ £59.0
RONICA ROTARY PRISM FINDER FOR ETRS, ETRSI ET(MINT- £75.0
RONICA MOTOR WINDER E	EXC+++ £89.0
RONICA 150mm F3.5 ZENZANON S	MINT- £165.0
RONICA 40mm f4 ZENZANON S ULTRA WIDE FOR SQ	MINT- £199.0
RONICA 50mm f3.5 PS LENS & CASE	MINT-BOXED £199.0
RONICA 65mm F4 ZENZANON PS FOR SQ	MINT-CASED £145.0
RONICA 110mm F4 PS ZENZANON MACRO FOR SQ	MINT-CASED £365.0
RONICA 150mm F4 PS ZENZANON FOR SQ	MINT-CASED £145.0
RONICA 180mm f4.5 PS LENS & CASE	MINT-BOXED £199.0
RONICA AE PRISM FINDER SQ-i LATST MODEL	MINT BOXED £225.0
RONICA PRISM ME METERED FOR SQA/SQAI	
RONICA SPEED GRIP FOR SQA/SQAI	MINT- £69.0
RONICA FILMBACK SQ-i220 FOR SQA/SQAi	MINT BOXED £79.0
ASSELBLAD 28mm f4 HC FOR H SYSTEM	
ASSELBLAD 120mm f4 HC FOR H SYSTEM	EXC++ £1,195.0
ASSELBLAD 503 CX BODY WITH BACK & WLF	
ASSELBLAD 90mm f4 FOR X PAN I & II IN KEEPER	MINT £365.0
ASSELBLAD 150mm f4 SONNAR T* BLACK	EXC++ £195.0
ASSELBLAD 150mm f4 SONNAR CF	MINT-BOXED £395.0
ASSELBLAD 50mm f4 DISTAGON SILVER	EXC++ £195.0
ASSELBLAD 150mm f4 SONNAR SILVER	EXC++ £175.0
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ASSELBLAD HTS 1.5X TILT AND SHIFT ADAPTOR	
ASSELBLAD GPS UNIT FOR H SYSTEM	
ASSELBLAD H13 EXT TUBE	MINT £165.0
ASSELBLAD PM90 PRISM FINDER	MINT- £275.0
ASSELBLAD PME3 METERED PRISM FINDER	MINT- £275.0
ASSELBLAD VFC-6 METERED PRISM	
ASSELBLAD A12 BACK CHROME	
ASSELBLAD WINDER CW AND REMOTE	
AMIYA 6 BODY REALLY NICE CONDITION	
AMIYA 150mm F4.5 "G" WITH HOOD FOR MAMIYA 6.	
AMIYA 645 SUPER WITH AE PRISM 80mm COMPLETE	
AMIYA 150mm f3.5 SEKOR C FOR 645 SUPER etc	
AMIYA M645J COMPLETE WITH 80mm f2.8	
AMIYA 150mm F4.5 "G" WITH HOOD FOR MAMIYA 6.	
AMIYA 180mm F4.5 SEKOR Z W FOR RZ	
AMIYA 250mm F4.5 LENS FOR RZ	
AMIYA 210mm F4 SEKOR C FOR 645	
AMIYA 180mm F4.5 SEKOR FOR RB	
AMIYA 220 BACK FOR RZ 67	MINT- £95.0
ENTAX 200mm F4 FOR PENTAX 67 + FILTER AND HO	
ENTAX 55mm F4 SMC FOR 6X7	MINT £175.0
ENTAX 55mm F2.8 FOR PENTAX 645	MINT BOXED £199.0
OLLEIFLEX SCHNEIDER 150MM F4.6 MAKRO FOR 600	
ASHICAMAT 124G COMPLETE WITH HOOD + CASE	MINT-CASED £375.0
Nikan Auto Facus & Digital Lancas	A

Nikon Auto-Focus & Digital, Lenses Accessories

NIKON F5 BODY REALLY NICE	
NIKON F100 FILM BODY SUPERB	MINT-BOXED £250.00
NIKON 10.5 f2.8 "G" IF-ED AF DX FISHEYE	MINT BOXED £399.00
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NIKON 28mm f2.8 A/F	MINT £135.00
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NIKON 40mm f2.8 "G" DX AF-S MICRO LENS	MINT BOXED £179.00
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NIKON 85mm f3.5 ED DX AF-S VR MICRO NIKKOR	MINT+HOOD £345.00
NIKON 180mm f2.8 A/F IF-ED LENS	MINT- £495.00
NIKON 18 - 70mm f3.5/4.5 IF-ED AF-S ZOOM	
NIKON 24 - 85mm f3.5/4.5 "G" ED AF-S VR LENS	
NIKON 24 - 120mm f4 "G" ED AF-S VR LATEST MODEL	MINT CASED £745.00
NIKON 28 - 200mm f3.5/5.6 A/F D	
NIKON 35 - 70mm f3.3/4.5 A/F LENS	
NIKON 35 - 135mm f3.5/4.5 A/F + HOOD	
NIKON 70 - 200mm f2.8 ED AF-S VR	
NIKON 70 - 200mm f2.8 ED AF-S VR II LATEST	
NIKON 75 - 300mm f4.5/5.6 A/F ZOOM + TRIPOD COLL	
NIKON 80 - 200mm f2.8 A/F IF-ED ZOOM GREAT LENS	MINT- £345.00
NIKON 80 - 200mm f2.8 A/F IF-ED ZOOM GREAT LENS	
NIKON 80 - 200mm f2.8 A/F IF-ED AF-S SILENT WAVE	
NIKON 80 - 400mm f4.5/5.6 "G" ED AF-S VR LATEST	
NIKON 200 - 500mm f5.6 ED AF-S VR LENS LATEST	
NIKON TC20E II 2X AF-S TELECONVERTER	
TAMRON 1.4X A/F "D" TELECONVERTER NIKON FIT	

SIGMA 2X EX DG TELECONVERTERMINT £145.00
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SIGMA 105mm f2.8 EX APO DG MACRO MINT-BOXED £295.00
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SIGMA 15 - 30mm f3.5/4.5 EX DG FULL FRAME MINT- £245.00
SIGMA 50 - 500mm F4.5/6.3 DG HSM OPT/STAB O/S MINT-BOXED £699.00
SIGMA 70 - 300mm f4/5.6 DG MACRO D5300 COMPMINT BOXED £110.00
TOKINA 12 - 24mm F4 IF DX ASPHERICAL AT-X PRO MINT+HOOD £299.00
TOKINA 16 - 50mm F2.8 ASPHERICAL AT-X PRO DXMINT BOXED £275.00
TOKINA 35mm f2.8 ATX PRO DX MACRO 1:1 LATESTMINT BOXED £295.00
TOKINA 300mm f2.8 AT-X SD PRO WITH HOOD MINT- £699.00

Nikon Manual Focus

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VIKON F2 A BODY FULLY WORKINGEXC+ £199.00
VIKON F2 BODY FULLY WORKINGEXC+ £169.00
VIKON F3 BODYEXC+ £245.00
VIKON F2 BODY BLACK WITH DW2 FINDERMINT- £265.00
VIKON F2 PHOTOMIC BODY CHROMEMINT- £275.00
NIKON F PHOTOMIC T WITH 50mm f2 NIKON LENSEXC++ £250.00
NIKON F "APOLLO" PHOTOMIC FTN WITH 50mm f1.4 MINT- £399.00
VIKON FE2 BLACK BODYEXC++ £165.00
VIKKORMAT FT3 BLACK BODYEXC++ £99.00
NIKKORMAN FT BODY WITH 50mm f2 LENSEXC++CASED £125.00
NIKON 18mm f3.5 AIS SUPERB RARE LENS MINT BOXED AS NEW £575.00
VIKON 24mm F2.8 AISMINT £199.00
VIKON 35mm f2.8 AlEXC+++ £129.00
VIKON 45mm F2.8 GN NIKKOR MINT- £199.00
VIKON 50mm F1.8 AIS SERIES EMINT £69.00
VIKON 50mm F1.8 Al MINT- £89.00
VIKON 50mm f1.4 Al MINT- £159.00
VIKON 50mm f1.2 AIS SUPERB LENSMINT BOXED £399.00
VIKON 85mm F1.4 AIS MINT-CASED £575.00
NIKON 105mm f2.5 AI WITH HOODMINT- £175.00
VIKON 180mm f2.8 AI WITH CAPSEXC++ £299.00
NIKON 200mm F4 AIS MICRO NIKKOREXC+++CASE £295.00
NIKON 200mm F5.6 MEDICAL NIKKOR + POWER PACKMINT BOXED £475.00
NIKON 300mm f4.5 AIS WITH TRIPOD COLLAR MINT- £295.00
VIKON 600mm f5.6 Ai WITH HOOD AND FILTER HOLDERSMINT-CASED £1,295.00
NIKON 1000mm f11 MIRROR LENS WITH CAPSEXC++ £495.00
NIKON 35 - 70mm F3.3/4.5 ZOOM NIKKOR MACRO AIS MINT- £169.00
NIKON 35 - 105mm F3.5/4.5 AIS ZOOM MACROMINT £175.00
NIKON 35 - 105mm F3.5/4.5 AIS ZOOM MACROEXC++ £139.00
NIKON 35 - 135 F3.5/4.5 AISMINT- £149.00
NIKON 35 - 135 F3.5/4.5 AISEXC+ £125.00
NIKON 35 - 200mm f3.5 AISMINT BOXED £199.00
NIKON MD4 GRIP DRIVE FOR F3MINT- £175.00
NIKON PK13 AUTO EXTENSION RINGMINT-BOXED £55.00
NIKON PK12 AUTO EXTENSION RINGEXC++ £49.00
VIKON PK11 AUTO EXTENSION RINGMINT £49.00
VIKON TC 200 CONVERTERMINT £69.00
VIKON SB 16 FLASH FOR F3/FM2/FM3/FE/FE2MINT-CASED £115.00
VIKON SB 16 FLASH FOR F3EXC++ £65.00

Olympus Manual

OM1N WITH 50mm f1.8 & CASE	MINT- £129.00
OM1 N BODY	MINT- £125.00
OM1 N BLACK BODY	EXC++ £119.00
OM2N BODY CHROME	MINT- £135.00
OM2SP SPOT BODY COMP WITH CAS	E EXC+CASED £99.00
24mm f2.8 ZUIKO + HOOD + CASE	
50mm F1.8 ZUIK0	MINT £39.00
50mm F3.5 MACRO	
135mm f2.8 ZUIKO	MINT £95.00
28 - 48mm F4 ZUIKO	
EXT TUBE 14mm, 25mm	MINT- £55.00
VARIMAGNI FINDER	MINT BOXED £59.00
	0M1 N BODY 0M1 N BLACK BODY 0M2 BODY CHROME 0M2S PSPOT BODY COMP WITH CAS 24mm 128 ZUIKO + H000+ CASE 28mm 72.8 ZUIKO 28mm 73.5 ZUIKO 35mm 71.8 ZUIKO 50mm 71.8 ZUIKO 50mm 71.8 ZUIKO 50mm 73.5 MACRO 135mm 12.8 ZUIKO

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18-55mm F2.8-4 R LM OIS XF	
18-135mm F3.5-5.6 LM OIS WR XF	E++ £529
27mm F2.8 XF	
35mm F1.4 XF R	
50-140mm F2.8 WR OIS XF	Mint- £1,049
50-230mm F4.5-6.7 OIS XC - Black .	
50-230mm F4.5-6.7 OIS XC - Silver .	
50mm F2.8 Macro Touit - Zeiss	E++ £549
56mm F1.2 R XF	
60mm F2.4 XF R MacroE++ /	Mint- £299 - £349
100-400mm F4.5-5.6 R LM OIS WR)	KF Mint- £1,299
300mm F6.3 Reflex ED UMC Samvan	na Mint- £189

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24mm F1.4 ED AS UMC Samyang	E++ £279
24mm F3.5 Tilt-Shift ED FE Samyang .	Mint- £529
28-70mm F3.5-5.6 FE OSS	Mint- £219
35mm F2.8 FE ZA	E++ £499
50mm F1.2 AS UMC CS Samyang	Mint- £199
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70-200mm f4 G OSS FE	Mint- £949
85mm F1.4 FE GM	Mint- £1.249
90mm F2.8 FE G OSS	Mint- £689
100mm F2.8 FE STM GM OSS	Mint- £1,289

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100mm F4 PE Macro	E++ £199
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150mm F3.5 PE	E++ £119
180mm F4.5 PE	E+ £149
2x Converter E	
Extension Tube E14	
AEII Meter Prism	
Prism Finder E	
Speed Grip E	E+ / E++ £29 - £35

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SQAM Body Only	E+ £129
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Autobellows S	. E++ £149
Extension Tube S18	E++ £59
AE Prism Finder S	Exc £59

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380EX Speedlite	E+ £49
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430EX Speedlite	Exc £79
430EZ Speedlite	
540EZ Speedlite	E+ £39
550EX Speedlite	
580EX Speedlite	E+ £119
MT-24EX Macro Ringlite	E++ £439
ST-E2 Transmitter	E+ / E++ £59 - £69

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8-15mm F4 L Fisheye USM E+	+ £889
10-18mm F4.5-5.6 EFS IS STM Min	- £149

10-22mm F3.5-4.5 EFSE+ / Mint- £259 - £2	7
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11-24mm F4 L USM E++ £2,1	3
135mm F2 L USM E++ £5	q
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14mm F3.1 T ED AS IF UMC SamyangE+ £1	9
15-45mm F3.5-6.3 IS STM EF-M	4
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17-85mm F3.5-5.6 IS USMAs Seen £	8
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20-35mm F2.8 ATX Pro TokinaE+ £2: 20-35mm F3.5-4.5 USME++ £1	4
20-331111 F3.5-4.5 03W E++ £1:	ე 4
20mm F2.8 USM	6
22mm F2 STM	8
24-105mm F4 L IS USM E++ £429 - £4	4
24-70mm F2.8 L USM Exc £3: 24-70mm F2.8 L USM II	ี 4
24-70mm F4 L IS USME++ / Mint- £989 - £1,0	4
24mm F1.4 L USM MKIIE++ / Mint- £989 - £1,0	4
24mm F2.8 STMMint- £: 24mm F3.5 L TSE MkII E++ £1,1	9
25mm F2 Distagon 7F F++ £9	4
28-105mm F3.5-4.5 USM	1
28-80mm F2.8-4 L USM E+ £3	3
28-90mm F4-5.6 USM II	4
28mm F2.8 SLII Asph Voigtlander	9
0F 10Fmm F0 0 4 F 70ion F C0	4
35mm F1.4 L USM E++ £7	4
35mm F2 EF Yonguo	4
40mm F2 8 STM F++ / Mint- £99 - £1	r N
35-1301111 F3.3-4, 2 CESS E++ £3.3 S5mm F1.4 L USM E++ £7.7 S5mm F2 EF Yonguo As Seen £40mm F2 Ultron SLII EF Voigtlander Mint- £2 40mm F2.8 STM E++ / Mint- £99 - £1 50mm F1.4 ZE Planar T* Zeiss E++ £3.5 0mm F1.8 EF Mk1 E+ / E++ £119 - £1.5 Come £1.9 CEM1	8
50mm F1.8 EF Mk1 E+ / E++ £119 - £1	2
50mm F2 R 3cam Leica	<i>i</i> 5
55-200mm F4-5.6 Di II Tamron E++ £	4
55-250mm F4-5.6 EFS IS E+ £	7
60mm F2.8 EFS Macro USM FFS E++ / MINT- £2	1
$ \begin{array}{llllllllllllllllllllllllllllllllllll$	8
70-200mm F4 L USME+ / E++ £3	3
70-210mm F3.5-4.5 USM E++ £	9
70-300mm F4-5.6 Di VC USD Tamron E++ £1:	9
70-300mm f4-5.6 IS USM E+ / Mint- £199 - £2	2
70-300mm F4-5.6 IS IUSM Mint-£3 70-300mm F4-5.6 IS IUSM E+ / Mint-£199 - £2 70-300mm F4-5.6 LI S USM E+ £6 75-300mm F4-5.6 LI S USM E+ £95 - £ 80-200mm F2-8 ATX Tokina E++ £95 - £	7
75-300mm F4-5.6 EF IIIE++ £59 - £	7
80-200mm F4 5-5 6 FF II F+ £2	4 2
80-200mm F4.5-5.6 EF IIE++ / Mint- £1,099 - £1,1	9
85mm F1.8 USM	3
90mm F2.8 SP Di Macro Tamron E++ £1	9
90mm F2.8 TS-E E++ £7:	8 7
100-400mm F4.5-5.6 L IS USM E+ / E++ £599 - £6	9
100mm F2.8 L Macro IS USM E++ / Mint £539 - £5	8
100-300mm F4.5-5.6 USM	6
150-600mm F5-6.3 SP DI VC USD Tamron E+ / E++ £449 - £5 200mm F1.8 L USMUnknown £1,5	12
200mm F2.8 L USM II E++ £4	4
300mm F2.8 L IS USME+ £2,4	7
300mm F2.8 L IS USM MKII E++ £4,24	4
300mm F2.8 L USM Exc £8: 300mm F4 L IS USM E+ £519 - £5	
400mm F2.8 L USM E+ £2,4	4
400mm F4 D0 IS USM E+ / E++ £2.279 - £2.29	9
400mm F5.6 L USME+ £6. 500mm F4 L IS USME+ £3,4	3
500mm F4.5 L USM	٥ 4
500mm F8 SP Reflex Tamron E+ £1	9
Canon Manual	

Canon Manual

T70 Body OnlyAE1 Black Body Only	E+ £2
AE1 Chrome + 50mm F1.8	E+ £7
FTb QL Chrome Body Only	Exc / E+ £49 - £5
24mm F2.8 FD	
35-105mm F3.5-4.5 FD	E+ £4
35-70mm F3.5-4.5 FD	
35mm F3.5 EX	
50-135mm F3.5 FD	Mint- £14
50mm F1.4 FD	
50mm F1.8 FD	
50mm F3.5 FD Macro	
70-150mm F4.5 FD	As Seen £1
70-210mm F4 FD	
75-200mm F4.5 FD	Exc £2

100-300mm F5.6 FD	E+ / Unused £55 - £99
100mm F2.8 B/lock	As Seen £49
100mm F4 FD Macro	E+ / E++ £99 - £109
135mm F3.5 FD	E+ £29
200mm F4 FD	E++ £129
300mm F5.6 FD	E+ £55
300mm F5.6 SP Adaptall T-30	00E+ £59
400mm F4 5 B/lock	E+ £249

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Panasonic GH5 Body Only	E++ £199 E+ / E++ £69 - £79 E++ £79 E+ / E++ £579 - £699

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A7S Body Only	Exc £949
A7S Mkll Body OnlyE++ / Mint-	£1.969 - £2.099
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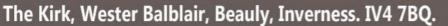
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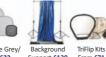




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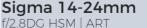
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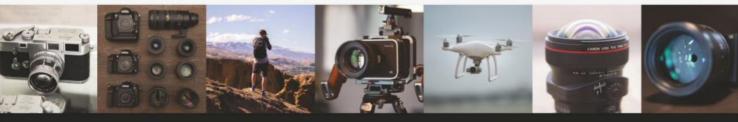


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making Arab carpets, Algiers, 'c1899, by Photochrom

hotochrom (now Photoglob Zürich, www.photoglob.ch) was founded in 1889 to exploit a process invented by Hans Jacob Schmid (1856-1924). The company grew out of Orell Geßner Füßli, a printing company dating back to the 16th century. Photochrom used up to 20 - ves. 20 - lithographic stones to reproduce colour images. Each stone was contact printed from an individual separation negative, and the colour image built up by sequential printing: the degree of precision required was truly Swiss. As far as I know, the pictures were hand coloured, but they could also be derived from separation negatives of original scenes.

The original is roughly 165x225mm, near enough whole-plate, which is important. A normal postcard is much smaller, and a constant, reasonably large size made it easier for the photographer to judge composition and content. Only easier, though: not easy. This would be a truly impressive picture shot with modern equipment – a (Swiss) Alpa, perhaps. Now try it with a plate camera on a tripod, with deadly slow plates, half a decade before red sensitisation... Then there's exposure: look into the shadows behind the tops of the arches, and the differentiation of the highlights.

All this is fascinating enough, but it isn't why I chose this picture, kindly made available by the US Library of Congress. No, it's because it's an absolutely stunning example of a kind of photography that is far more difficult than it looks. It really is very difficult to tell the story of a craft while setting it in the context in which it is practised. I know, because I've tried in both India and China.

Perfect composition and technical expertise

For me, this is the perfect balance of the craft, the craftswomen, and the setting in which they work. Come in too close and you lose the context of the Moorish architecture - crop off the top and bottom of the picture with your hands and you'll see what I mean. Show any more of the building, and the women

For me, this is the perfect balance of the craft, the craftswomen, and the setting in which they work'



and the carpet soon become too small to see.

The detail is brilliant, too. With your thumb, cover the ewer and table on the right and the teapot on the left. See? Then ask yourself what is behind the big hanging blanket on the left, and whether the rest of the background behind the women (screens, carpets, wall hangings) always looks like that or if it's

normally a bit more of a mess. Oh, and don't forget the plants, the flashes of cool green.

In short, I am consumed with admiration for both the technical expertise and aesthetic nous of the (anonymous) photographer, to say nothing of the excellence of the reproduction, which is quite a tribute to a picture that is now just under 120 years old.

Roger Hicks has been writing about photography since 1981 and has published more than three dozen books on the subject, many in partnership with his wife Frances Schultz (visit his new website at www.rogerandfrances.eu). Every week in this column Roger deconstructs a classic or contemporary photograph. Next week he considers an image by Marion Post.

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